Spring 2017

Is Addressing Climate Change Women's Work? Political Leadership and the Climate

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Honors Thesis, Macalester College Environmental Studies Department

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Spring 2017

Abstract

In an era when climate science is politically controversial, recent polling data shows that American women are more concerned about climate change than their male counterparts. This research uses both voting record analysis and qualitative interviews with legislators to examine whether the observed gender gap on climate change persists among elected political leaders. Linear and logistic regression results show no statistically significant climate change gender gap within legislative voting behavior, and interviews suggest that though women may be more willing to collaborate on climate change policy than men, subtle gender differences are often overridden by partisanship. However, findings suggest that reframing climate issues more broadly as environmental issues and connecting global issues to local community issues may elicit more support from female Republican legislators. Even small factors influencing political leaders' opinions on climate change matter in a world that must move towards climate solutions.

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Preface

"Education is an adventurous quest for the meaning of life,

involving an ability to think things through."

-Stephanie S. Tolan, *Surviving the Applewhites*

Last year, I was sitting in class when my now thesis advisor made a comment about the rhetoric around women and environmental work. Several weeks later, I attended a women's brunch focused around climate change and flashed back to her remark. I started to think about whether or not climate change was a gendered issue, and did a bit of research only to find that recent polling data shows it is, at least for Americans. I had previously participated in research that looked at the impacts of gender on executive branch leadership, and I wondered if the gender gap on climate change carried over into legislative spheres. That question blossomed into the opportunity to think a lot about climate change politics, something that frequently occupies my mind regardless, and to talk to political figures about their climate positions. Though parts of the writing process have been personally challenging - such as talking objectively to legislators about climate change when I disagree with their policy positions - I have overall really enjoyed this learning experience.

One of the most interesting things about doing this project was the political moment in U.S. history during which I was conducting it. I began working on it in 2016 while the Paris Agreement, the first international agreement on climate change action to go into force, was being ratified around the world. International action on climate change was at a historical high point

and conversations about climate change belief, and action, felt important but comfortable. Encouraged by this, I saw this project as an opportunity to further understand why people may care about climate change and to possibly get more people on board with an already progressing movement.

What a difference a year makes. I finished this thesis in the spring of 2017, after the election and inauguration of President Donald J. Trump, amidst huge political unrest in the U.S.. As I, along with the rest of Americans, watched a man who had made sexist and racist campaign statements take control of our country, cut funding from the Environmental Protection Agency (EPA), select an oil executive to be Secretary of State, cut climate data programs from governmental organizations, and oppose the Paris Agreement and the Clean Power Plan, I felt a whole new urgency about women's and climate issues. I hope that in this challenging political time, this project will answer and raise questions about the political rhetoric around both climate change and gender, separately and together, and offer clues to detecting and connecting with sympathetic legislators.

Writing this would not have been possible without the input and support of many amazing people that I am lucky to know. I am particularly thankful to my thesis advisor Dr. Roopali Phadke for her extensive feedback, patience, and logistical help; Dr. Christie Manning for valuable brainstorming sessions and for forever touching my life by showing me the importance of vulnerability and compassion in academic research; Dr. Julie Dolan for her time and expertise; Henry Whitehead for understanding environmental studies research struggles firsthand; Breanna Mochida, Ollin Montes, and Kate Lane for knowing when to leave me alone with my computer and when to drag me away from it; Julia Makayova for always working too

hard and showing me that I can too; my father for teaching me to question the world; my mother for teaching me how to write, how to think, and that being kind is more important than being smart; and Samuel Erickson for believing I could learn statistics and being the one person who can always make me feel better.

I am also extremely grateful to every person who gave their time to be interviewed for this project and was candid with me about their experiences and opinions. Words cannot express how grateful I am to all of you.

Introduction

"Some say the world will end in fire,
Some say in ice.
From what I've tasted of desire
I hold with those who favor fire.
But if it had to perish twice,
I think I know enough of hate
To say that for destruction ice
Is also great
And would suffice."
-Robert Frost, *Fire and Ice*

Anthropogenic climate change is one of the greatest trials humanity has ever faced. It's causing floods, droughts, sea level rise, decreased crop yields, and increased incidence of vector-borne disease, to name only a few of a multitude of threats to human well-being. It will only get progressively worse over time if we, as a global community, do not swiftly act to reduce our greenhouse gas emissions (IPCC 2014). Ask 97% of climate scientists, and they'll tell you climate change is real, though they really wish it weren't (NASA 2016). Though 64% of U.S. adults report feeling concerned about climate change (Saad & Jones 2016), U.S. political leaders have so far failed on numerous accounts to address the issue. Recent notable moments of climate policy negligence include the refusal by the U.S. Congress to support President Obama's attempts to join the U.S. into the Paris Agreement, an international agreement to combat climate change (Foran 2015), as well as the election of Donald Trump as President of the U.S., a man who tweeted that global warming was a hoax created by the Chinese (Trump 2016). Clearly,

there is a gap between the climate change concerns of our scientists, our citizens, and our elected political leaders.

Why are U.S. political leaders not moving forward on this issue that already has had, and if left unchecked will continue to have, serious impacts on human well-being? Especially when a majority of scientists and citizens express concern about it? To answer this question it is necessary to better understand who in the U.S. feels concerned about climate change and believes we need action, who doesn't, why, and how those preferences are being translated into and expressed through our political system by those who have political power, such as our elected officials.

Scholars have thoroughly explored the correlation between political party, support for pro-environmental legislation, and belief in climate change (Lakoff 1996). Democratic voters and politicians are more likely than Republican voters and politicians to express serious concern about climate change, by a factor of about three to one (Zainulbhai 2015). However, though it is by far the most strongly correlated predictor of climate change belief and desire for action, political party is not the only determinate of a person's climate awareness and concern.

National polling data in the U.S. shows that the environment, and more specifically climate change, has become a gendered issue, with women expressing more concern than their male demographic equals about climate change (McCright 2010, Zainulbhai 2015). Since females polled express more concern about climate change than males do, does this same distinction apply to female and male legislators? Do female and male politicians care about climate change for different reasons? What impact do these answers have on U.S. climate policy leadership?

To answer these questions, I employ both quantitative and qualitative methods. In my first chapter, I link the existing body of scholarship discussing the impacts of gender on pro-environmental behavior with scholarship on the representation of women in the U.S. Congress. In Chapter 2, I present voting record and bill/amendment/resolution proposal analysis, examining the potential correlation between gender and legislative policy making decisions about action on climate change. In Chapter 3, I present case studies of ten Minnesota elected legislative officials to contextualize and further understand the reasons behind the results discussed in Chapter 2. I conclude by synthesizing the results of my research and considering the implications on climate change advocacy and policymaking.

Chapter 1: Literature Review

An interdisciplinary question about women, climate change, motivations, and politics requires interdisciplinary research. I bring together relevant literature from environmental studies, sociology, psychology, feminist political theory, and political science to provide a context for the research and analysis performed in subsequent chapters.

This section summarizes research on the gender gap on climate change in the American citizenry. It then addresses the psychology of climate change belief, focusing specifically on system justification and risk perception and aversion by gender, and acknowledges the unavoidable gender gap - that women will suffer first and worst from climate change. This section then discusses the gender gap on environmental issues in general, since climate change is an environmental problem and the research on environmental gender gaps is more extensive than on climate gender gaps, focusing on literature on the role of gender socialization in environmental concern, the feminist implications of the environmental gender gap and the relationship between concern and action.

Moving on from the environmental studies and psychology literature, this section also touches on some of the literature on women in American politics, specifically focusing on elections, as well as behavior and representation strategy once in office. Much of this literature is specific to women in legislative politics, but some offers general information about political women.

It is important to acknowledge that the literature considered and the fundamental research questions of this study operate within the gender binary. This is because much of the existing

literature on gender and the environment and gender in politics uses the binary, and all current members of Congress identify within the binary.

The Gender Gap on Climate Change

When controlling for outstanding social and demographic variables, McCright's analysis of eight years of 21st century national U.S. Gallup polling data concluded that women express more concern about climate change than men: 35% of women worry about global warming 'a great deal,' while this is true for only 29% of men; 37% of women believe global warming will 'threaten their way of life' during their lifetime, compared to 28% of men; and 35% of women believe the seriousness of global warming is underestimated in the news, compared to 28% of men (McCright 2010). Interestingly, despite the fact that women's viewpoints on the urgency of global warming, scientific consensus on global warming, and the primary cause of global warming are more in line with the current scientific consensus on climate change, women underestimate their scientific knowledge on the issue, while many men overestimate their scientific competence. This holds true even when controlling for other factors such as race and age; being young and white makes an individual more likely to be knowledgeable about climate change (McCright 2010).

A similar survey conducted five years later by the Pew Research Center found that within the surveyed U.S. population, women were 17 percentage points more likely than men to believe that climate change is a serious problem, 18 percentage points more likely to believe major lifestyle changes are necessary to solve the problem, and 21 percentage points more likely to believe climate change could harm them personally (Zainulbhai 2015). The climate gender gap

exists internationally but is most prominent in the U.S. and other developed nations (Zainulbhai 2015). These results from Pew, alongside those of McCright, are supported by other climate change public opinion studies that have found that women express slightly more care about climate change than men (Brody et al. 2008; O'Connor et al. 1999; Leiserowitz 2006; Malka et al. 2009). Recently among these is the Yale Project on Climate Communications (2014), which maps climate change concern onto a scale of 'six Americas' from 'alarmed' to 'dismissive'. Women make up a larger percentage of the 'alarmed' group and the 'concerned' group (the second most alarmed response) than men, though the gender gap found in this study is smaller than in others discussed. Overall the literature finds gender gaps on climate change in the 10-20 percentage point range. This may seem small, but relative to other public policy gender gaps, such as on gun control and social welfare (Center for American Progress 2012), the climate change gender gap is significant.

Why does this gap exist? Though much of the gender gap on climate change can be attributed to the gender gap on environmental issues more generally (discussed later on in this chapter) there are two psychological principles that apply more strongly to climate change than other environmental concerns: gender-based system justification and risk aversion tendencies.

Research in behavioral psychology finds that climate change belief is associated with low levels of system justification (Feygina, Jost & Goldsmith 2009). System justification is the ideological practice of supporting existing social, economic, and political structures, even if they are not functioning optimally or resulting in preferred outcomes for disparate groups of people. System justifiers struggle to believe in or act on climate change because strong climate change

action would likely require an overhaul of all existing structures (McKibben 2016) in a way that previous environmental policy, though beneficial and transformative, has not.

According to Feygina, Jost & Goldsmith (2009), women are less likely than men to be system-justifying. Though more research is needed, this is currently thought to be a result of the fact that women have historically been oppressed and discriminated against within existing systems (Feygina, Jost & Goldsmith 2009), making them more willing to accept the reality of things such as climate change that might disrupt the system because they are well aware that the system is imperfect and have less to gain than men from maintaining it as it is. This contributes to a growing understanding of the gender gap on climate change.

In addition to system justification, risk aversion is an important determinant of the gender gap on all environmental issues, but particularly on climate change. Generally, even outside of environmental issues, women tend to be more concerned than men about risk (Slovic 2001). Women also tend to express more concern than men when environmental issues explicitly relate to risk perceptions (Xiao 2012; Kahan 2007; Bord & O'Connor 1997). This could be because men tend to focus on the probability of a risk event, while women focus on the consequences were the risk to actually occur (Kahan 2007; Drottz-Sjöberg 1991). Also, of all demographic groups, white men are the most willing to impose risks on other people without their consent (Kahan 2007). This is particularly relevant because most political elites are white men.

Though risk is of concern in most environmental issues, the risks and uncertainties associated with climate change are much higher than in other environmental policy topics because the timeline and severity of the impacts are not yet fully understood (IPCC 2014). Because the precise nature and timescale of the potential damages of allowing climate change to

worsen remains unclear, while at the same time the costs of transforming our economy to mitigate greenhouse gas emissions are evident, it is the people with the highest risk aversion, often women rather than men, who will be most supportive of spending money now to prevent problems later. This is partly because women are less likely than men to suffer from temporal discounting, so women find it easier to take potential future problems into account in present decision-making (Eisler, Eisler & Yochida 2003).

Many Americans do not perceive climate change as having immediate health and safety risks to their communities, so asking about climate change is much like asking about broader environmental awareness and concern (McCright 2010). Therefore, scholarship on the environmental gender gap helps to support and elucidate the nascent work on the climate change gender gap. Though climate change is not synonymous with environmental issues in general, it is an environmental issue. Understanding how the environmental gender gap works is necessary to further the conversation about the climate change gender gap because the environmental gender gap literature is more robust.

The Gender Gap on the Environment

Despite some debate in the late 1970s and early 1980s in the literature on the gender gap about whether or not it actually exists (Zelezny, Chua & Aldrich 2000), scholars have now verified that generally, women do show higher levels of environmental concern than men (Gifford & Nilson 2014; Blocker & Eckberg 1997; Davidson & Freudenburg 1996; Mohai 1992). Of course, this gap describes averages, not the behavior of specific individuals. Typically, women show a higher motivation for ecological thinking and behavior (Eisler, Eisler & Yoshida

2003) while men tend to have more energy-oriented leanings (Hau & Swenson 2013). The gender gap is exacerbated when men and women consider local environmental issues, with women showing even higher levels of concern, though there is a difference in environmental attitudes even when there is no immediate local problem with health and safety risks. The gender gap persists, even after controlling for other variables such as socioeconomic status, education, geographic location, and race. This gap has many interacting causes, including the following:

Gender Socialization

Society views and treats men and women differently, resulting in men and women developing different perceptions of, and methods of interaction within, their communities. Women are often raised to be socially responsible and oriented towards the needs of others (Lester 2008; Zelezny, Chua & Aldrich 2000). Young men are taught that masculinity entails detachment, control and mastery, whereas society values empathy and care in young women (McCright 2010; Cowan 1979; Merchant 1979). Women are socialized as community members and taught to be closer to the environment than men are because women's bodies are perceived to be biologically closer to nature due to childbirth (Altman 2013; Ortner, in MacKinnon & McIntyre 1995). Gender socialization has created divides around prioritizing the needs of the community separately from those of the individual.

The environmental movement today suffers from a constant divide between energy, environment, and economics, with many politicians arguing that we should not act on climate change because it will hurt the economy. This ties back to gender socialization. Just as women are taught to be more environmentally concerned, men are taught to be economy and energy-

oriented (Hau & Swenson 2013). The original literature on this subject suggests that men often prioritize economic concerns because of traditional provider roles, while women are able to prioritize environmental ones because of existing familial obligations (Davidson & Freudenburg 1996). However, that may be changing as women increasingly work outside of the home. For example, recent suggests the gender gap may actually be reversed in China, with men caring more about the environment. This is attributed to the fact that Chinese women often have economic struggles and feel they must choose between pressing economic concerns and less pressing environmental ones, as well as the fact that women often have less education (Shields & Zeng 2011). In contrast, in the U.S., men have historically been taught that their role in society is to provide for themselves and their families, and so they prioritize economic needs over community-based concerns. Even though this is changing as women become more economically empowered, there are still many residual social pressures around gender and economics, which play a role in the perceived conflict between environmental and economic concerns.

Typically, women trust institutions of economics, science, and technology less than men do. This mistrust relates back to the system justification argument described earlier in this paper: men tend to support existing systems more than women do, likely because women have often been oppressed and constrained by social hierarchies implicit within those systems (Feygina 2009). As a result, gender influences a person's trust of technology. The interaction between technology and self-enhancement values helps determine how much concern a person will feel about their environmental impacts (Mobley & Kilbourne 2012). These social divides are only reinforced in the media. For example, three-fourths of energy-saving utility commercials are narrated by men, while the majority of eco-friendly household items are depicted being used by

women (Hau & Swenson 2013). Social and cultural norms nudge men to focus on energy and economics, and women to focus on the environment. This is tremendously problematic because in order to create meaningful change, energy, economics, and the environment must be considered equally in political decision-making.

The gap becomes more of an issue as people move into the prime of their careers and the height of their impact on the world around them. This is due to the fact that most people come into the prime of their careers in their 30s-40s, the same time that they are parenting, and parenthood widens the environmental and economic gap between men and women. Motherhood increases environmental concern for women (Blocker & Eckberg 1989; Davidson & Freudenburg 1996) and there is some support for the argument that fatherhood decreases environmental concern for men because it becomes superseded by other concerns (Blocker & Eckberg 1989). Parenthood exacerbates men's economic concerns, because they feel extra pressure to provide, and women's health concerns, because they feel extra pressure to protect (Davidson & Freudenburg 1996). Unfortunately, the literature on this subject is fairly outdated, so parenthood may no longer be a major influence on men and women's environmental beliefs. Outside of academia, this opinion has been espoused in the popular news. For example, a recent Guardian article about women leading the anti-fracking fight in Great Britain suggests that this is because women feel protective concern for their families and are thus able to take a long view on climate change that men cannot (Vidal 2016).

Education also influences the gender gap. In the early 2000s, male subjects showed higher environmental knowledge on many topics, whereas females showed higher motivation for ecological thinking and behavior (Eisler, Eisler & Yoshida 2003). However, more recent studies

show that women's viewpoints on timing of global warming, scientific consensus on global warming, and the primary cause of global warming are more in line with the current scientific consensus on climate change than those of men (McCright 2010). In contradiction to earlier literature, more recent studies find that more education typically leads to more concern (Blocker & Eckberg 1997), and in the U.S., between 1999 and 2010, women earned approximately 58% of bachelor's degrees and 60% of master's degrees (National Center for Education Statistics 2016). One representative from the oil and gas industry claimed that women are leading the anti-fracking fight because women are less likely to have strong science backgrounds and don't want to trust in science (rather than because fracking is legitimately dangerous and shown to cause earthquakes) (Vidal 2016). However, to the contrary, the evidence shows that not only are women more educated than men, but that more education correlates with increased concern about climate change. This is an example of gender roles being used to invalidate women's concerns.

In sum, the literature suggests that the major driver of the gender gap on environmental concern is gender socialization. Socialization in this context is built on the specific differentiation of men's and women's roles into those of economic provider and familial caretaker, enhanced by parenthood and further complicated by education. It is possible that we may see gender gaps shrink in the future in the U.S. as gender roles continue to become less clearly defined.

Feminist Implications of the Gender Gap

Some literature connecting feminism and ecology argues that the historical and current subjugation of women and damage to nature are linked. As shown by the environmental gender

gap discussed above, women often express closer ties to the natural world than men. Many people equate nature with femininity. In one study, 82% of surveyed respondents said that going green, when defined as including everyday behaviors like carrying a reusable water bottle or driving a Prius, is "more feminine than masculine" (Bennett & Williams 2011). Not only do women have greater concern about nature, society perceives green behaviors as feminine, making it more socially difficult for men to engage in green behaviors and further linking women and the environment.

Why are women and nature seen as connected? Some scholars argue that this occurs because, having been subordinated to men in every society since culture and social norms are historically male constructs, women are undervalued. As a result, women are equated with the environment, which, like women, has often been subjugated by humans in the pursuit of economic growth (Altman 2013). Early ecofeminist theorists argued that the split between nature and culture resulted in a devaluing of women, reinforcing objectification (Davidson & Freudenburg 1996). Further, ecological destruction threatens everyday life - including health, water, and food - spheres that are often managed by women, so women will be the first to suffer the impacts of ecological damage (IPCC 2014; Mies & Shiva 1993). Perhaps as a result of this, the fights against the subjugation of nature and women have been linked, beginning with the 1890 Federation of Women's Clubs' support of the preservationist movement to defend wilderness spaces in the U.S., and continuing with the modern support of the League of Women Voters for clean air and water legislation (Merchant, chapter 8 in MacKinnon & McIntyre 1995).

In some ways, defending the environment ties to defending women. However, ecofeminists studying the climate change problem argue that even the current framing of climate

change and the proposed solutions are sexist because the impacts are gendered and women have been left out of the conversation because men hold many of the positions of governmental and corporate power around the globe (Moosa & Tuana 2014).

Gender-Based Climate Vulnerability

Women are actually more vulnerable than men to climate change. Recognizing that women across the globe face different challenges than men, and often have their choices limited by the societies in which they live, the United Nations formed the UN Convention on the Elimination of All Forms of Discrimination Against Women (United Nations 2009). As an established vulnerable group in society, women across the world will face the brunt of the immediate damage of climate change. This is more relevant in developing countries than in developed countries like the U.S. because developing countries will likely face larger impacts sooner as a result of both geographic and economic factors.

Women make up the largest percentage of the world's poor, and lack a voice in decision-making and access to resources, with elderly women and young girls being the worst off. In addition to existing economic inequalities making it challenging to adapt to environmental disasters, women's roles within traditional societies place them on the front lines of climate change (Brody, Demetriades & Esplen 2008). Climate change will increase the incidence of infectious disease. Because women care for the sick, they will be more likely to catch illnesses. Climate change will also make water scarcer and agriculture more difficult, increasing existing burdens on women who collect water and grow crops for their families. Climate change also increases the likelihood of natural disasters, such as floods, droughts, and hurricanes. Women in developing countries are less likely than men to have the skills to survive. For example, in the

1991 Bangladesh flood, the death rate was five times higher for women than men because many women did not know how to swim or climb trees and were unaccustomed to leaving the house without male accompaniment. As people who are often first to suffer climate impacts because of their position in society, women should be included in mitigation and adaptation decisions because they have knowledge and experience handling climate change problems (Brody, Demetriades & Esplen 2008).

This is not to say that men are immune to the impacts of global climate change; every member of every society on the planet will be affected in some way, but the impacts experienced will differ in type and severity across gender, class, and racial lines (Masika 2002). Gender sensitive approaches require noticing existing inequalities and recognizing that both men and women face climate change challenges (Brody, Demetriades & Esplen 2008).

However, women are not simply victims. In addition to being a vulnerable group that has been and will continue to be hurt by climate change, women have demonstrated their capacity to help their communities adapt to climate change at the grassroots level (Masika 2002). Women should be included in the creation of climate change solutions. However, sole responsibility should not fall to women because the problem is so big that the input of half of the people on the planet cannot be omitted.

The Role of Women in Climate Change Solutions

As the gender that shows more concern about climate change and other environmental issues, it makes sense that women ought to be involved in climate change solutions. Women have often been leaders on local environmental issues. While acknowledging women's capacity

and agency to make positive change, it is also necessary to mention that women around the world are very vulnerable to the impacts of climate change.

Relationship Between Concern and Action

Given that women show more environmental concern than men, and that many women around the world will face terrible climate change impacts, it would make sense for women to be more active on climate change issues than men. However, there is no consensus in the literature that this is the case. Though some papers argue that the effect of gender is stronger on pro-environmental behavior than on environmental attitudes (Zelezny, Chua & Aldrich 2000), others counter than though women show more concern, their rates of environmental activism are lower than those for men (Mohai 1992; Blocker & Eckberg 1997). Scholars arguing that women's environmental engagement is lower report that the differences in activism levels cannot be solely accounted for by the gender gaps in general rates of political participation (Mohai 1992). Others attribute the disconnect between women's concern and participation to the lack of social standing to become involved in meaningful ways (Blocker and Eckberg 1997). Still others argue that men and women engage in different ways: women are more likely to recycle at home (Tobler, Visschers, & Siegrist 2011) but men are more likely to attend political meetings about environmental issues (Shields & Zeng 2012).

Despite, or perhaps because of, this uncertainty, women are increasingly being lauded as major actors in climate change solutions. The United Nations Framework Convention on Climate Change, the major international meeting on climate policy, has a video about women's roles, which argues that

> "Women are powerful agents of change when it comes to protecting the planet. Because they are adapting to droughts, floods, and other extreme weather events right now, they are at the frontlines in the battle against climate change. This puts them in a good position to recognize some of the opportunities that climate change presents" (UNFCCC 2015).

Women also make many of the consumer decisions for households around the world, meaning that their decisions to conserve or not conserve carry a lot of weight. Aside from their specific experiences, women's participation and action also matters because they make up half the population of the planet and have a lot of control over family-level daily life. Leaders around the world recognize this and are trying to draw more women to participate in climate change mitigation and adaptation (King 2016). Take, for example, the president of the Marshall Islands, a country that is threatened with total submersion as a result of climate change driven sea level rise. President Hilda Heine declared at the 22nd Conference of the Parties to the United Nations Framework Convention on Climate Change that "We need the women of the world to save planet Earth, for she's truly in peril" (Wheeling 2016).

Historically, women have worked to defend the environment (MacKinnon and McIntyre 1995) and currently, many women are taking stands on climate change and other environmental issues (Klein 2014). Much of this work was and is on the community organizing grassroots level. There are examples from all over the world of women creating local projects to help "heal the environment" while still providing for their communities (Orlando and Joyce 2012). Bridget Burns, advocacy director for the Women's Environment and Development Organization, acknowledges that "women are prevalent in places of less power" (King 2 2016).

However, that does not mean that women *only* act on climate change on the local stage. Women have also been leaders on climate change on the international scale. At Conferences of

the Parties to the United Nations Framework on Climate Change, a series of large international meetings that help determine international mitigation and adaptation policy, women have historically only made up around 30% of national delegates, but this number is going up. In 2015, at the 21st Conference of the Parties, women made up 38% of national delegates, and the conference was chaired by a woman, Christiana Figueres (King 2 2016).

But what about the national level, the scale between the local and the international? Much of the work done by local movements is constrained by federal policy and the international agreements reliant upon national-level implementation to function. How are women operating at the state and national policy levels on climate change, in the U.S., one of the world's biggest emitters, and a country with a history of refusal to cooperate on global climate agreements? Does the gender gap translate from the citizenry to the political sphere? To begin to answer these questions and to understand the impact women are having and could have in U.S. national politics, it is necessary to recognize how gender shapes the roles and decision of elected officials.

Women in American Legislative Politics

In the 240 years that we've been a country, the U.S. has never had a female president, and women are underrepresented in the judiciary branch as well as the legislative. A concern of underrepresentation is that underrepresented groups do not get their needs met by the government. Traditionally, women in Congress fight for women's issues, such as healthcare and childcare. This defense of 'women's issues' could potentially extend to climate change, given

that climate change is prioritized by women in the citizenry, more so than by men. I chose to focus on legislative women for this analysis because they are elected officials.

Getting Elected

Women are both historically and currently underrepresented in the U.S. legislature. The first woman was not elected to the legislature until 1916 (interestingly, several years before women were granted the right to vote in the U.S.), and currently, women comprise a paltry 20% of both the House and the Senate, a shockingly small percentage considering that women make up more than half of the U.S. population (Center for Women in American Politics 2015).

There are several theories as to why women are not present in Congress to the same extent as men. The problem is not that women can't win elections - it's that women often don't run for office (Dolan, Deckman & Swers 2007). First, women feel the need to stay home with their families more strongly than men do because of gender socialization. Many female legislators are older than their male colleagues because they wait to run for office until their children are out of the house. This is reasonable because the media tends to focus more on women's families than men's families, and most people do not want their children in the news while they are campaigning. Second, politics has a set of "feeder" careers, most prominently law, which enable people to run for office easily, and many of those fields are dominated by men. Third, while men often run for office of their own volition, the majority of female elected officials report that they first ran because several people in their lives told them that they would do well (Dolan, Deckman & Swers 2007).

Though women and men run similar and equally successful campaigns, the two groups often run with different goals in mind. Most elected officials cite both personal ambitions and drive to address a particular set of issues as their motivations for running for office. However, women are slightly more likely than men to run to address a particular issue than out of pure political ambition (Dolan, Deckman & Swers 2007), resulting in women's advocacy for women's issues. Because women and men run for slightly different reasons, and often in different points in life, it is unsurprising that they also perform differently while in office.

Performance in Office

Aside from the equity issue associated with women's underrepresentation, the reason representation matters so much is that women and men actually perform differently in Congress. Generally, even when controlling for political party, women tend to be more liberal than their male counterparts (Welch 1985; Dolan, Deckman & Swers 2007). Female lawmakers also tend to be more collaborative than competitive, unlike male legislators (Jeydel & Taylor 2003) and focus more on addressing women's issues than men do.

There are three types of representation in standard political analysis: descriptive representation, substantive representation, and surrogate representation. Descriptive representation occurs when a political figure has similar identities to their constituency. Substantive representation occurs when a political figure addresses the needs of their constituency, regardless of whether or not they share identities with the constituency. Surrogate representation occurs when a political leader chooses to represent a group outside of their

constituency, say, a Senator from California worrying about Oklahomans, often because the representative has something in common with the people like race, gender, or class.

Research suggests that descriptive representation (women representing women) leads to substantive representation (women addressing women's issues). Women in the legislature are more likely to feel responsible for representing women's interests than their male colleagues, and are therefore more likely to sponsor legislation on social issues that matter to women, such as education, welfare, and reproductive rights (Walsh, chap 14 in Rosenthal 2002; Dolan, Deckman & Swers 2007).

Interestingly, in an increasingly partisan period in politics, women legislators sometimes cross party to vote for women's issues (Swers 1998). This is primarily relevant to Republican women, as most women's issues are liberal issues that the Democratic Party supports. Republican women have to take care not to side with Democrats too frequently, for fear of damaging their reputation within their party (Dolan, Deckman & Swers 2007). They may behave differently when Republicans are the minority and the majority; when Republicans are the minority, Republican women vote with Democrats on women's issues, but when Republicans are in the majority, they often focus on getting other policies passed for their districts that are more in line with Republican party values and goals (Swers 2002). However, generally, descriptive representation leads to substantive representation for women. The third form of representation, surrogate representation, also plays a role for women, with many women in the U.S. legislature expressing their goal to represent all women, not just those people from their state or district (Carroll, chap 3 in Rosenthal 2002).

This representation is not merely symbolic. It leads to achievements on women's issues because women are able to pass the bills they propose, though there is some disagreement among scholars about whether or not gender impacts a politician's ability to pass bills. Length of tenure and seniority are certainly bigger predictors of successful legislation-making than gender, though women in the majority are less influential than men in the majority (Jeydel & Taylor 2003), and length of tenure may be impacted by gender because women often wait to run for office until their children are grown up, giving them shorter political careers. This is not to say that there are not many successful and impacting senior women in politics, from US House Minority Leader Nancy Pelosi to Republican Chairman of U.S. House of Representatives and Vice-Chair of President Trump's transition team Cathy McMorris Rodgers.

Some research suggests that women don't pass bills on women's issues very successfully: while four percent of all bills become law, only two percent of bills on women's issues and only one percent of bills on women's issues that were actually sponsored by women become law (Volden, Wiseman & Wittmer 2016). However, other data shows that in the 109th session of Congress, though women were only 16% of the policymakers, they were 25% of the voices on stem cell policy and 21% of the speakers on the Central American Free Trade Agreement. These numbers shot up higher on women's issues, with 50% of the speakers on a contentious abortion bill being women. Women are willing to fight for their bills and their issues, perhaps to a greater extent than their male colleagues (Pearson & Dancey 2011). Regardless of whether or not women are able to get women's issues bills passed at the same rate as men pass non-women's issue bills, some women's issue bills are passed, and women and men have disparate policy-making impacts.

In all, women in the U.S. and around the world express more concern than men about climate change and other environmental issues. Though this increased concern may not always translate into increased action, women have a central role to play in climate change mitigation and adaptation, and they are expressing their capacity and agency primarily at the local level. In the U.S., this is partly because women are less likely than men to decide to run for state or national political office, and it is difficult to elect someone whose name is not on the ballot. When women run for office, women win at the same rates as men, and when they are in office, they manage to pass legislation and they champion traditional women's issues, such as legislation supportive of families, welfare, and women's health and reproduction. The aggregation of this literature suggests that since there is a gender gap on climate change in the American public, and since women tend to carry women's issues with them when they are elected office, there may be a gender gap on climate change in the U.S. legislature.

And this brings us full circle back to my research questions: Does the gender gap on climate change translate into the political sphere? Do female political leaders consider climate change and environmental policy to be women's issue policy and treat it as such, or does it get couched in the male energy framework? What are the impacts on policy development? I will explore these questions more fully in the coming chapters, using both quantitative analysis of voting and bill proposal records in the national and state legislatures and qualitative case study interviews with elected political leaders. Hopefully, a better understanding of the inclusion of climate change in political decision making in the U.S. will enable more ambitious climate policy in the future.

Chapter 2: Voting Record Analysis

As discussed in the preceding chapter, I hypothesize that gender is a factor in climate change voting patterns and that female legislators in both parties are more likely than their male counterparts to propose and vote for pro-climate legislation. I test that premise in this section.

Methodology

Data Collection

For this analysis, I chose to focus on the most recent Congressional session at the time of writing: 114th (January 3, 2015 – January 3, 2017). In this session, the party and gender demographics were as follows:

> *Senate*: 48 Republican men, 6 Republican women, 30 Democratic men, 14 Democratic women, and 2 Independents, both men. Democratic women were 31.8% of total Democrats and Republican women were 11% of total Republicans.
>
> *House*: 225 Republican men, 22 Republican women, 131 Democratic men, 62 Democratic women, and 1 vacant seat. Democratic women were 32.1% of total Democrats and Republican women were 8.9% of total Republicans.

For the analysis, I consider both voting and proposal records for bills, amendments, and resolutions related to climate change. I sourced the climate votes and proposals considered from the Center for Energy and Climate Solutions, a nonpartisan nonprofit organization dedicated to

forging practical solutions to climate change, and relied upon their standard of what constitutes a climate bill. I sourced all voting record data from govTrack and used their ideology scores for individual members in my analysis (govTrack calculates ideology based on bipartisan bill sponsorship). I used Senate bills exclusively because there were only 3 relevant House Bills, which would not produce a well-fitted model.

I included voting records because roll-call vote analysis is a very common analysis approach in political science. Unfortunately, voting record analysis is not perfect. The number of climate bills that have reached a vote within the last session is low. Also, some research suggests that women don't pass bills on women's issues very successfully: while four percent of all bills become law, only two percent of bills on women's issues and only one percent of bills on women's issues (such as women's healthcare) that were actually sponsored by women become law (Volden, Wiseman & Wittmer 2016). Therefore, if climate change is in fact a women's issue, then only considering the voting record on bills that came to a vote would fail to paint the whole picture. To address this, I also include bill, amendment, and resolution proposal records for both the House and the Senate to supplement my analysis because many pro-climate bills were proposed, but killed in committee before reaching a vote. I used bill, amendment, and resolution records for the proposal analysis.

For the voting record analysis section, I did not consider those who abstained from a vote because it is impossible to conclusively determine in every case whether a person abstained for ideological reasons, personal reasons, or reasons irrelevant to the situation at hand. I also did not consider Independents because there were only two in the Senate in the relevant time period and both are male. For the voting record analysis component, I used most bills, amendments, and

resolutions that came to a vote during the 114th Congressional sessions that the Center for Energy and Climate Solutions deemed relevant to climate change. Those I did not use were excluded solely on the basis that I thought they would confound the data. I threw out bills that had both positive and negative climate change components (such as some bills about carbon capture and storage), or unclear climate impacts, reasoning that both a 'yes' and a 'no' vote could be justified by a person concerned about climate change. I also tried to throw out bills that included many other confounding components (for example, the America COMPETES Reauthorization Act of 2015 proposed by Lamar Smith because it included everything from climate to education to congressional budgets).

Additionally, I did not consider proposals with clear confounding situational factors, such as S.AMDT.29 (which amended S.AMDT.2 to S.1), which expresses the belief of the Senate that climate change is real and not a hoax. Senator James Inhofe urged fellow Republicans to vote 'yes' on the amendment, arguing that climate change was obviously real, though it was not caused by humans. As a result, the voting record on this amendment cannot be used to determine senators' positions on whether or not climate change is real because a 'yes' vote could be taken as belief or denial in anthropogenic climate change. I also tried to clean the data for external factors unrelated to actual voting or bill proposing intentions. For example, Dennis Ross, representing Florida's 15th district, accidentally voted 'no' when he meant 'yes' on H.AMDT.447 and then included a statement about that mistake in the official record, so I counted his vote as 'yes'.

The bills considered in the voting record analysis are those relevant to climate change, as determined by the Center for Energy and Climate Solutions, that came to a vote during the 114th

Congress. The eight bills meeting this criteria are listed in a table (see Appendix 1), as are the 55 pieces of pro-climate legislation considered in the proposal analysis (see Appendix 1).

Data Analysis

Initially, I conducted a simple bivariate count analysis on the voting records and bill proposals. The goal of this analysis was to determine whether, absent other factors, women are more likely than men to support climate legislation. These tables are shown in Appendix 2. However, I also wanted to account for other variables, chief among them the fact that women compose a larger percentage of the Democratic presence in Congress than the Republican presence. This is important because climate change is a known partisan issue.

In order to include other influencing factors in my analysis, I chose to use statistical regression. There are two main regression types used by social scientists when analyzing a binary variable such as a yes/no vote: Ordinary Least Squares (OLS) regression and logistic regression. I use both in my analysis. The two regression types typically output comparable trends and results when used on the same data set (Pohlman & Leitner 2003), but OLS is more suited to a range in the dependent variable, while logistic is used for a binary dependent variable.

For the voting record analysis, I chose to use the OLS regression model because I wanted to aggregate groups of bills. I gave each legislator a score reflective of their performance over many bills. For example, a Senator who voted pro-climate on 5 of the 8 bills considered has a score of 5. The dependent variable was pro-climate vote score and the independents were gender, party, and ideology (a metric of each member's degree of liberalism or conservatism, necessary because some members of each party are more extreme than others). For gender, male

= 0 and female = 1; for party, Republican = 0 and Democrat = 1; ideology is a continuous scale with 0 the most progressive and 1 the most conservative: Senator Warren is a 0 and Senator Inhofe a 1.

For the bill proposal analysis, I chose to use logistic regression rather than OLS regression because I was looking at a binary response variable - did a person propose a pro-climate bill or not? I considered the Senate and the House differently and gave each member of the 114th Congress a score of 0 or 1 depending on whether or not they had proposed a pro-climate bill in the session. As I did in the voting record OLS analysis, I used gender (male = 0, female = 1), party (Republican = 0, Democrat = 1), and ideology (0 to 1 scale from most liberal to most conservative) as independent variables. However, for the bill proposal analysis I included a fourth independent variable: leadership. The leadership score was simply the number of total bills that the legislator proposed in the 114th Congress, sourced from govTrack. I intended it to control for the fact that some members of Congress simply propose more bills than others because of personality. I cleaned the data for both regressions in R Studio and ran the regressions in SPSS.

Limitations

As is often the case in social science research, the main limitations of this study result from the fact that people's behavior is multifaceted and complex, and it's very challenging to control every variable. I tried my best to minimize the presence of confounding variables, but it is impossible to create a full control. Please consider the results of this study while keeping in mind the following limitations.

Political Context

I chose to analyze decisions and behaviors in the most recent Congressional session. I chose this time period because I wanted the results to remain relevant as long as possible after completion of the study. However, in the time period considered, there was a Republican majority in the Congress and a Democratic president, and these factors may exert influence on the decision-making of individual legislators. For example, Republican women, who have been shown to vote across the aisle more than Republican men, may behave differently when Republicans are the minority and the majority. When Republicans are the minority, Republican women may vote with Democrats on women's issues, but when Republicans are in the majority, they may often focus on getting other policies passed for their districts that are more in line with Republican party values and goals (Swers 2002). I extrapolate that Democratic women may behave similarly, voting across the aisle more under a Republican majority.

Therefore, though the results of this study can be used to speculate about general voting behavior of men and women in Congress, they are only fully descriptive for the session at hand.

Region-Specific Goals

Hopefully all political representatives make votes for what they believe is the good of the country as a whole, but it's important to remember that their first duty is to represent the people of their state or district. Therefore, a person could conceivably vote against their personal belief about what is best for the nation as a whole, and instead support what they believe is best for the people they represent. For example, Senators from mining states like North Dakota have an

incentive to protect the fossil fuel industry that Senators from states such as Minnesota do not. This is partially addressed in controls I included for individual ideology, but if a specific bill had a provision for jobs in particular states (such as bills on the Keystone pipeline), that may be reflected in the voting record.

Political Deals

Having spoken with a former Congressional aide and former Congress member who wish to remain unnamed, I recognize that members of both the House and Senate often make strategic votes that are not representative of their true position on an issue. These strategic decisions include decisions about image and decisions about relationships. If, for example, the Democratic party knows a bill will pass with votes to spare, the party may agree that some members can either abstain from the vote or vote with the Republicans to help build a bipartisan image and assist with re-election campaigns for members from states which do not always elect people from one party or the other. Also, members of Congress can make voting bargains amongst themselves ("if you vote no on 'x', I'll vote yes on 'y'"), meaning that not every vote made represents the Congress person's true opinion on the matter at hand. This should also be partially addressed by ideology controls, but it is difficult to eliminate entirely and is a confounding factor in all roll call voting record analyses.

Results

The results of the bivariate analysis of the 8 bills considered shows that for every bill, when gender is the only variable considered, women are more likely to vote pro-climate than

men are (Appendix 2). This is interesting, but unexpected given that of women in Congress, the majority are Democrats.

When the explanatory variables of party and ideology are added, the OLS regression voting record analysis on the 8 Senate bills considered yields the following results:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.970[a]	.941	.939	.904

a. Predictors: (Constant), ideology, gender, party

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.175	.571		7.316	.000
	party	4.487	.421	.612	10.662	.000
	gender	-.040	.250	-.004	-.158	.875
	ideology	-4.561	.705	-.384	-6.472	.000

a. Dependent Variable: goodvotes

In sum, the voting record analysis shows that being a Republican makes it less likely for a person to make pro-climate votes (statistically significant) and being ideologically conservative makes it less likely for a person to make pro-climate votes (statistically significant). Gender is not a statistically significant factor.

The proposal analysis using logistic regression to incorporate party, ideology, and leadership for each member of Congress yielded the following results for the Senate:

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	71.550[a]	.200	.326

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

Classification Table[a]

			Predicted		
			climate_bills_introduced		Percentage Correct
	Observed		0	1	
Step 1	climate_bills_introduced	0	77	3	96.3
		1	14	4	22.2
	Overall Percentage				82.7

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	gender	-1.067	.747	2.038	1	.153	.344
	party	3.073	1.592	3.727	1	.054	21.609
	ideology	.269	2.391	.013	1	.910	1.309
	leadership	.014	.014	.904	1	.342	1.014
	Constant	-4.023	2.379	2.860	1	.091	.018

a. Variable(s) entered on step 1: gender, party, ideology, leadership.

The proposal analysis using logistic regression to incorporate party, ideology, and leadership for each member of Congress yielded the following results for the House of Representatives:

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	162.600[a]	.063	.176

a. Estimation terminated at iteration number 7 because parameter estimates changed by less than .001.

Classification Table[a]

			Predicted		
			climate_bills_introduced		Percentage Correct
	Observed		0	1	
Step 1	climate_bills_introduced	0	402	1	99.8
		1	25	0	.0
	Overall Percentage				93.9

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	gender	-1.055	.644	2.687	1	.101	.348
	party	2.132	.564	14.277	1	.000	8.434
	leadership	.032	.014	5.473	1	.019	1.033
	Constant	-4.635	.585	62.811	1	.000	.010

a. Variable(s) entered on step 1: gender, party, leadership.

Both the results from the Senate and the House analyses show that being Republican makes it much less likely for a person to propose a climate-friendly bill. The gender variable is not statistically significant, in either result. The results of the bill proposal analysis are in line with the results of the voting record analysis in that both confirm the importance of party and ideology but find gender to not be statistically significant.

Analysis & Discussion

Whether or not there is a slight gender bias among federal legislators on climate change is still unknown, due to the fact that the correlation between gender and voting/proposing behaviors was statistically insignificant. However, it is clear that the gender gap among legislators, if it even exists, is much less broad than that shown by polling of American citizens. There are several reasons why this may be the case.

First, party divisions on climate change are much clearer cut in the legislature than in the citizenry and may therefore simply be dominating everything else. In both analysis methods used, being a Republican had a significant lessening impact on predicting that an individual would make pro-climate political moves. That is a much more extreme party split than in the citizenry. For example, 68% of American voters and 48% of Republican voters polled claim to want governmental action to prevent climate change (Target Point Consulting). This is a much larger percentage than in federal government Republicans, the vast majority of whom have still refused to acknowledge climate change is occurring and anthropogenic. Many on the left side of the political spectrum argue that this is a result of conservative politicians being financially supported by members of the fossil fuel industry on their campaigns. As such, party divisions in the legislature may be overshadowing other demographic factors in a way that is less true among citizens.

This extreme partisanship is a symptom of a second political phenomenon: people who run for federal office self-select and therefore have characteristics that distinguish them from people who choose not to run for office, and women end up doing much of their political work at the local level. People who run for office tend to be more confident in their beliefs and values

than those who do not. Also, women are much less likely to run for higher office than men are, and often run only when others encourage them to do so (Dolan, Deckman & Swers 2007). Women are actually strongly represented in local government and on school boards; it's higher office that creates such a large representation gap.

This tallies with the fact that many grassroots environmental activists on climate change and other issues are women, so the third explanation for the null result is that women prefer to take climate action at a local level. The local women's environmental movement is exemplified by Lois Gibbs, a woman and a mother who wanted to protect her children against toxic waste, is widely recognized as having founded the grassroots environmental justice movement. Lois Gibbs lived in Niagara Falls, New York, and realized that much of the sickness she saw in her community could be attributed to the enormous amount of chemical waste left by Hooker Chemical Company in the nearby Love Canal (Goldman Environmental Prize Website). She formed the Love Canal Homeowners Association by calling other mothers from her kitchen table and organizing them to fight to get community members evacuated. Eventually, Gibbs and her neighbors prevailed, and the U.S. government even passed SUPERFUND legislation to provide for the cleanup of other toxic sites. We see this legacy of female leadership continued today in organizations like the Mom's Clean Air Force and Mothers and Grandmothers Against Fracking that want to protect children from the future hazards of climate change. These are all female activists who work at the local level to protect families. Women who run for federal office are often a different subset of women, and federal office is far from the only way that women are able to engage on climate issues. Perhaps women with strong feelings about climate change are

choosing to remain at the local level rather than the federal level, leading to a lessened or non-existent gender gap on the federal level.

Finally, research suggests that while in campaigning and working in office, women behave differently than their male colleagues. Women often work across the aisle, and, at the federal level, have a bipartisan women's caucus that gathers to discuss being a woman in the legislature and to work on women's issues (Dolan, Deckman & Swers 2007). The most successful bipartisan legislators tend to avoid focusing on extremely polarizing issues. Because women tend to work more bipartisanly than their male colleagues, that may make a contentious issue like climate change perhaps one to avoid, to ensure that others can still be addressed. To address some of these more qualitative 'why' questions about legislative behavior, and to discover whether the gender gap truly does not exist or whether it is just being suppressed by other larger factors such as party, I interviewed legislatures about their motivations for their climate policy opinions, which will be discussed in my next chapter.

Suggestions for Future Work

Since the results find gender to be a statistically insignificant factor, in contradiction to what is suggested by compiling the literature on the environmental gender gap and on women in American politics, I think that more work on this subject is needed. I recommend using voting samples from many more sessions of Congress, both to increase the sample size and to determine whether the results differ, depending on the majority party in control of Congress and the White House. It would be useful to compare the magnitude and significance of a gender effect across Congressional sessions of different party control.

I also believe it's important not to rely solely on voting records and proposal analyses to determine whether or not there is a correlation between gender and climate change concern in policy spheres. Quantitative research can show statistical correlation or lack thereof, but it cannot show how people doing the policy work perceive women and men's advocacy for and against climate change and how that influences their policymaking. Qualitative research, such as interviews with legislators and lobbyists gives a perspective on whether or not gender is something people consider when working with colleagues or lobbying for particular bills. The following chapter provides a starting point for qualitative research on this issue.

Chapter 3: Government of the People?

My previous chapters have discussed climate change positions by focusing on psychology and political science literature and representing voting record data using statistical analyses. But all of these approaches are meant to model and explain the behavior of people - so who are the individuals involved and how do individual decisions aggregate into collective ones?

At this moment in U.S. history, when we think of climate advocates in politics, we think of people like Senator Bernie Sanders and Senator Elizabeth Warren, strong progressives who take steps to explicitly describe their climate change positions, back peoples' movements like the People's Climate March in 2014, and make statements such as Sanders' speech on energy and the environment:

> Unless we take bold action to reverse climate change, our children, grandchildren and great-grandchildren are going to look back on this period in history and ask a very simple question: Where were they? Why didn't the U.S. of America, the most powerful nation on earth, lead the international community in cutting greenhouse gas emissions and preventing the devastating damage that the scientific community was sure would come? (Sanders 2015)

In contrast, when we think about climate skeptics in U.S. politics, we think about leaders like Senator James Inhofe, who famously brought a snowball in a plastic bag into the U.S. Senate in 2015 as part of his argument that climate change is not real. President Donald Trump who once tweeted that "climate change is a hoax by the Chinese." Though that statement has since been redacted by members of Trump's team, the President has proven to still be unconcerned with climate change by selecting former members of the oil industry and climate deniers to positions such as Secretary of State and EPA Administrator.

Why are some elected public officials raising "Protect the Climate" signs while others wield snowballs? The obvious common denominator here is political party: Sanders and Warren are Democrats, while Inhofe and Trump are Republicans. But these people are at the extremes of their parties - every Democrat isn't a Warren and every Republican isn't an Inhofe. Though in general, climate change is an issue that maps easily onto party divisions, there is some crossing of party lines. While the Democrats remain fairly unified (no Democrat in the U.S. Congress has openly expressed disbelief in anthropogenic climate change), the Republicans are not a solid block. In 2015, the Senate voted to determine whether or not human-caused climate change is real, and 5 Republicans defected from their party to vote yes: Mark Kirk (IL), Lindsey Graham (SC), Susan Collins (ME), Lamar Alexander (TN), and Kelly Ayotte (NH). The Climate Solutions Caucus, a project of the Citizen's Climate Lobby, is a bipartisan body attempting to find economically viable solutions to climate change with even numbers of Republicans and Democrats (currently 13 each). In other words, not every Republican is on board with denial of anthropogenic climate change.

Why not? What are the factors that make it likely for someone to defect from their party on such a contentious issue? My hypothesis, though seemingly disproved by the quantitative statistical analysis, was that it has at least something to do with the gender of the official, something that seems supported at first glance by anecdotal evidence. Of the 5 Republicans who voted that anthropogenic climate change was real in 2015, 2 of them, or 40%, were women, a striking percentage when compared to the fact that at the time women were only 11% of Senate Republicans. However, that was one vote with a very small sample size, so I kept asking around.

One afternoon, I participated in an Environmental Defense Fund (EDF) conference call about the state of environmental policy under the Trump administration. I asked Fred Krupp, EDF President, and Jeremy Symons, Associate Vice President of Climate Policy, whether or not, in their lobbying and advocacy experience, gender had an impact on climate change belief and concern. They said yes, but they speculated it might have a less prominent effect in Congress than in the citizenry. Jeremy Symons explained, "[That gender gap] is something we focus on a lot here actually...with the additional concern particularly among women voters on both sides of the political spectrum." He cited the success of Mom's Clean Air Force as an explanation of how EDF has mobilized women. He was quick to explain that Mom's Clean Air Force has impacted both men and women legislators, but also to acknowledge that "one of our top targets is Senator Susan Collins, Republican from Maine," because she has been one of the most likely, along with Kelly Ayotte from New Hampshire who lost her seat in the November 2016 elections, to make pro-environmental votes. Fred Krupp supplemented Jeremy's remarks by explaining that "party discipline does really count for a lot, and though there's a gender gap in the general public, I'd probably say less so in the U.S. Senate just because the pressures of party discipline are so high."

In order to investigate why my quantitative analysis did not pick up the gender gap suggested both by the literature and anecdotal evidence and to determine whether or not women and men had different reasons for caring or not caring about climate change, I decided to interview federal legislators and ask questions about opinion and decision-making factors.

Methods

Unfortunately, October 2016 - March 2017, the time period I had designated to interview members of Congress, turned into one of the most contentious periods in U.S. politics, with a divisive presidential campaign and post-inaugural policies that sparked mass protests about immigration, women's rights, and science funding. This period is perhaps most clearly represented by the 2017 Women's March, with 673 reported marches on 7 continents drawing an estimated five million people worldwide, and 500,000 in Washington DC., to the streets to advocate not just for women's rights but a list of other progressive issues as well in response to Trump's inauguration. In the aftermath of a volley of contentious Executive Orders, Congress members' phones were ringing off the hook, their answering machines were full, and the email boxes were flooded with constituent appeals. This has been a beautiful moment for political engagement in the U.S., but not a good time to attempt to connect with federal officials for the purpose of research rather than advocacy.

However, I did not want to give up the qualitative part of the research design because of the nuance and personal context that interviews offer. As a substitute, I interviewed a series of state-level legislators in Minnesota and two of Minnesota's three federal legislators. I chose to focus on Minnesota because currently, it has a similar composition and political context to the 114th Congress, the period I conducted voting and proposing record analysis on: both the Minnesota Senate and the federal Senate had 20 women with 6 Republican women; both Minnesota and federal legislatures had Republican majorities; Minnesota had DFL progressive governor Mark Dayton and the U.S. had Democratic progressive president Barack Obama. The only major difference is that the Democratic Party in Minnesota is referred to as the DFL (the

Democratic Farmer-Labor Party), but it is the Democratic party - for example, Al Franken, the DFL Minnesota federal senator is referred to as a Democrat on the national stage.

Conveniently, at the time of the study, I also lived in St. Paul, Minnesota, which facilitated the interview process. Being a Minnesota voter (and therefore a constituent), as well as being also in close proximity to the capitol to talk to legislative assistants to schedule interviews, both increased my response rate. It was beneficial that I was able to conduct the majority of interviews in person because in my experience it increased the likelihood that a person would be relaxed and open with me and willing to give recommendations for others to interview. People were also willing to talk for much longer than I had anticipated. While it would have been fantastic to talk to federal legislators, Minnesota legislators were an excellent alternative and I am really grateful for their time. The main disadvantage of using Minnesota legislators is that it puts the quantitative and qualitative sections of this thesis at different scales - quantitative is federal and qualitative is primarily state. However, it did not make sense to conduct a quantitative analysis of Minnesota level climate data because there were fewer directly relevant bills.

Within the Minnesota legislature, I approached and talked with men and women from both parties. My selection criteria for interview proposals was that the person be currently involved in, or have a legislative history with environment and/or energy committees. That way, everyone I talked with would have an existing position on climate change and some knowledge of the subject. I attempted to approach even numbers of people from the four considered categories (Republican men, Republican women, DFL men, and DFL women). However, I did not receive even response rates from each category. I completed a total of 10 interviews, talking

to 3 Democratic women, 4 Democratic men, 2 Republican women, and 1 Republican man. It was much more difficult to get Republicans to agree to meetings than Democrats. Additionally, I had several instances where I scheduled meetings with Republicans, particularly Republican men, that were then cancelled after I sent my consent form and written project description. This is perhaps unsurprising due to the documented lack of interest in climate change among Republicans, to the fact that men are less invested in gender issues than women, and to the fact that Republicans are in the majority in Minnesota, so they are busy right now. I mostly reached out to Senators because I wanted interviewees who had longevity in their public service and could speak not just about climate change but also about party and gender dynamics from substantial experience. I was unable to complete thorough interviews with the two federal members of Congress in this study, since I spoke with both of them after public talks that they gave.

For the eight interviewees that I had very thorough conversations with, I had several sets of scripted interview questions that I drew from during the interviews. I typically began by asking interviewees about their position on climate change (though with known climate deniers I instead began the interview by asking what environmental issue is of biggest concern to them, to break the ice and get them talking about something that mattered to them). Depending on the answer to the climate change question, I had two follow-up scripts.

One script was intended for interviewees who clearly believed in climate change and included questions such as:

- What impacts of climate change are you most concerned about?

- What other environmental issues concern you, and which environmental issue is most important to you?
- What are the most important solutions to climate change?
- Who is most responsible for implementing climate change solutions?
- Who are your most important allies on this issue? Is there anyone you're able to work across the aisle with? Is your party on your side?

The other script was intended for interviewees who did not believe in climate change and included questions such as:

- How did you come to your current position on climate change?
- What do you think will be lost by addressing climate change, even if it isn't real?
- Independent of climate change concerns, what do you think about renewable energy?
- Do you think your opinion on climate change is reflective of the rest of your party's opinion?
- Do you ever work across the aisle on other environmental issues that concern you?

After discussing the interviewee's personal opinions about climate change, since each male/female/Republican/Democrat provided a case study of legislators' climate policy beliefs and motivations, the scripts re-converged to discuss the impacts of gender on climate policy opinions. I asked interviewees whether they thought that their male and female colleagues approach climate change policy differently, and whether they thought gender plays a role in

climate change belief and action in the legislature. I then followed up by asking them to explain why they answered the way they did on the gender issue. Depending on their answers, I then also asked if they see a gender gap on environmental issues in general. I finished every interview by asking if there was anything else the interviewee wanted to tell me about climate change or gender in the legislature.

In addition to the scripted questions I asked the interviewees, I asked follow up questions about the anecdotes they shared with me. Sometimes I followed up because the answer was central to my research question, and other times I followed up because I wanted the person to feel relaxed and comfortable talking with me. Though I mostly tried to keep to the script, I did not want to constrain conversations that were going well. I found that in general, career politicians are comfortable speakers and don't need a lot of prompting. The most difficult part of these interviews was attempting to keep interviewees on track; for example, if I asked a question about climate change and then they started talking about water pollution, I tried to use follow up questions to get at the original question. I noted whether I thought that someone was intentionally attempting to avoid answer my question, or just getting off track telling a story.

I include a summary of my interviews in the table below, followed by a more thorough discussion of my findings. These interviews are meant to serve as case studies and not to be statistically significant.

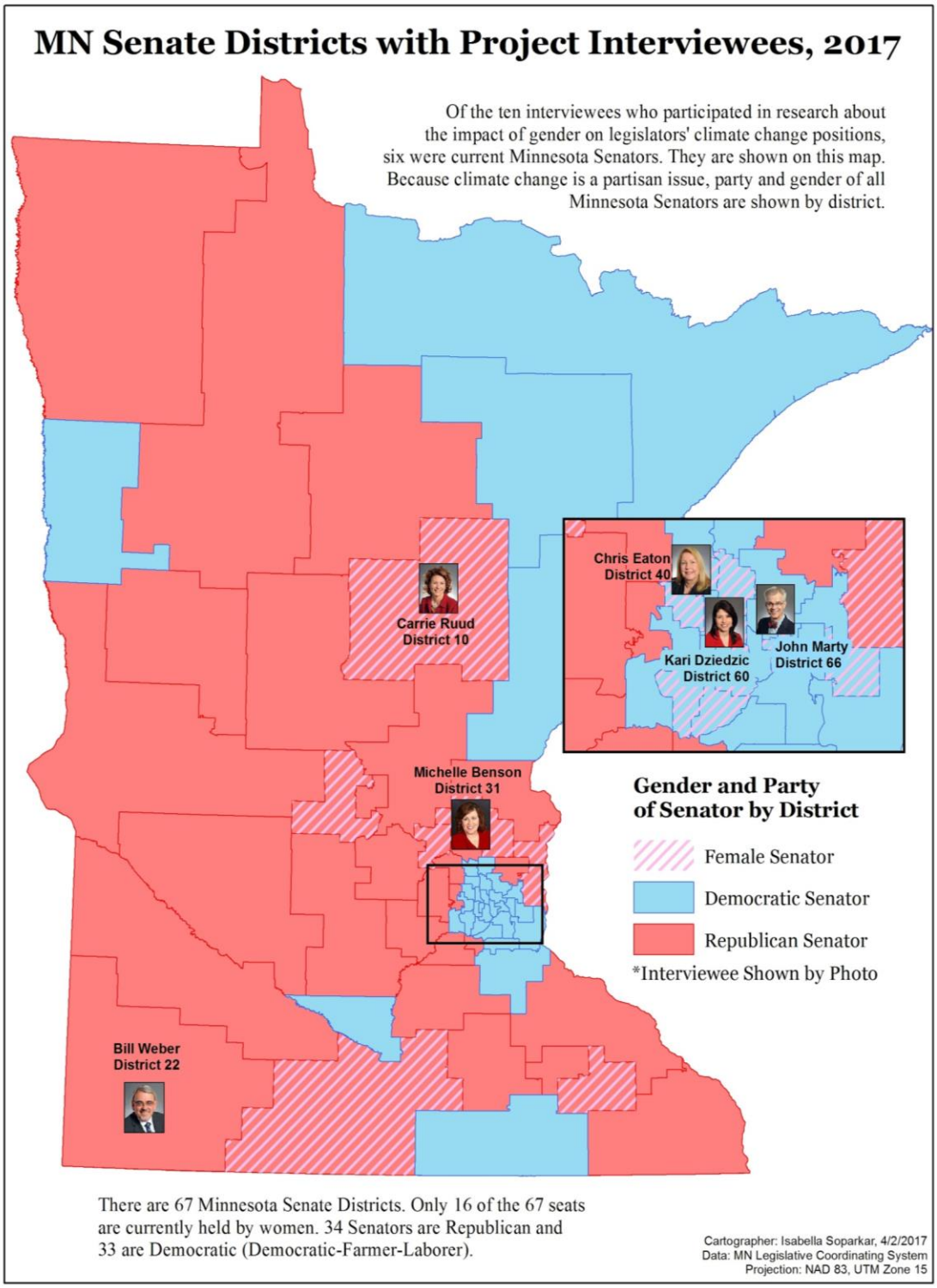
INTERVIEW SNAPSHOTS

Name and Role Of Interviewee	*Climate change belief and concern?*	*Reason for belief and concern stance*	*Stance on climate action (direct or indirect)*	*Observes gender gap on climate change in legislature?*

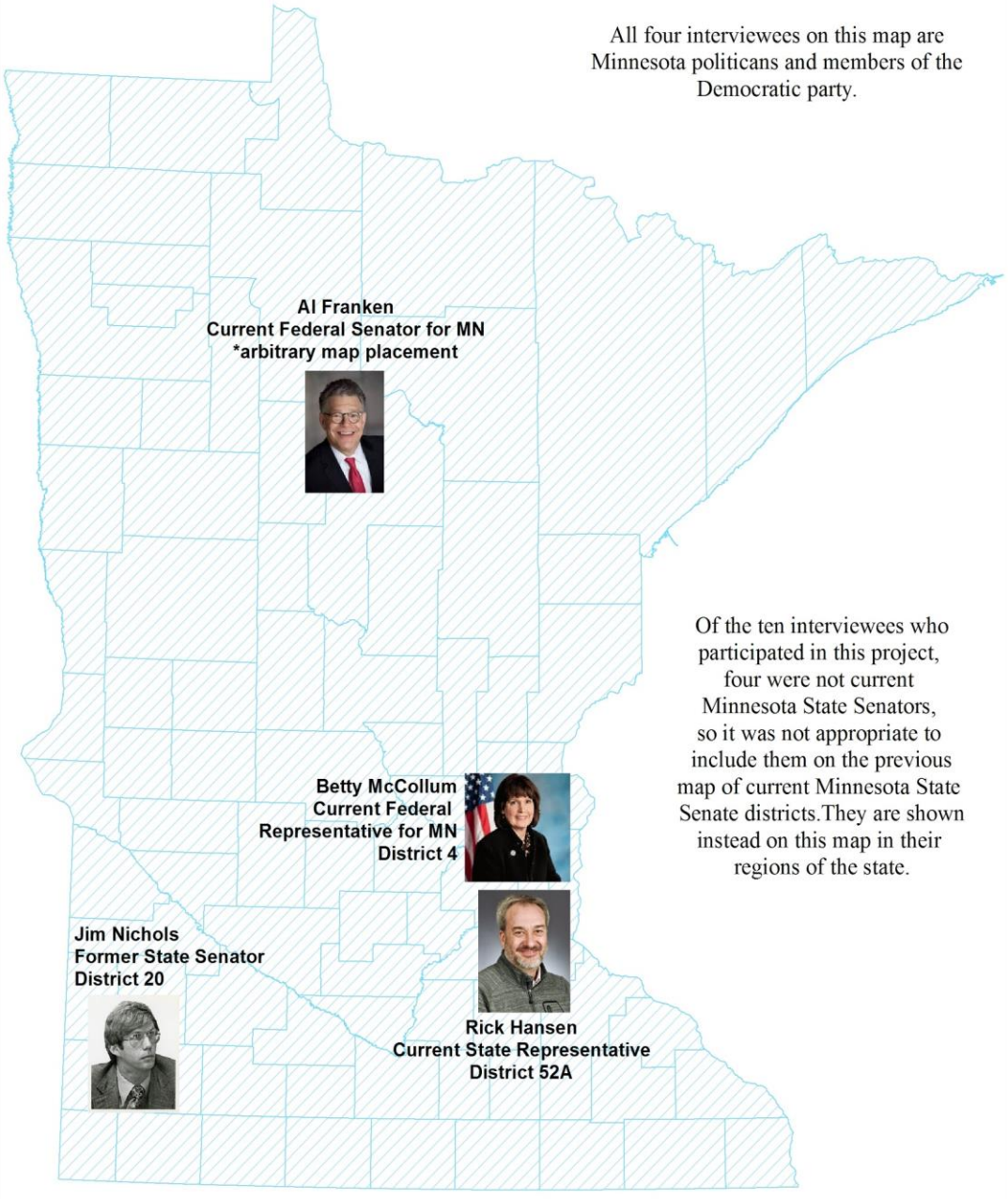
Jim Nichols Male Democrat Former MN State Senator	Yes, high concern	Started with air pollution concern	Direct - focused on sustainable agriculture, ethanol and renewable energy, especially wind	Yes - thinks women are more willing to collaborate on environmental issues and that men's egos get in the way
Rick Hansen Male Democrat Current MN State Senator	Yes, high concern	Strongly believes the science, particularly concerned about ocean acidification and resource scarcity, with any resulting conflicts	Direct - renewable energy, land stewardship, carbon tax. He thinks consumers will have to accept some burden to create solutions because right now government is not doing enough	Yes - thinks that from childhood women are taught to have 'stewardship' over land and family, while men are taught to have 'dominion,' which leads to environmental abuses
John Marty Male Democrat Current MN State Senator	Yes, extreme concern	Concerned about vulnerable populations and future generations	Direct - renewable energy, energy conservation, mindset shift. Believes those with the most power are most responsible to act	He thinks the gender gap is small but existent. He attributes it to women being better educated than men and being socialized to be collaborative and less egotistical, so therefore willing to work across the aisle. Thinks other factors like party and rural/urban are better predictors of legislator behavior
Al Franken Male Democrat Current MN	Yes, moderate concern	Grandchildren and economics	Direct- renewables but also natural gas	No comment on the gender gap

Federal Senator			as a ‘bridge fuel’	
Kari Dziedzic Female Democrat Current MN State Senator	Yes, moderate concern	Flooding, droughts, and particulate matter pollutants that will harm constituents long and short term	Indirect - mostly concerned about water and toxics issues influenced by but peripheral to climate change	Doesn’t think that climate change is a gendered issue in the Senate, but acknowledges that female Republicans are willing to work collaboratively on other environmental issues
Chris Eaton Female Democrat Current MN State Senator	Yes, existing concern	Climate change is not her number one environmental concern - she prioritizes water issues and water and health issues related to climate change	Indirect - mostly concerned about water and toxics issues influenced by but peripheral to climate change	Thinks women are more willing to address climate change and other environmental issues and attributes this to women being collaborative, as well as typically younger (because many men have been in the Senate for decades) so more flexible and progressive
Betty McCollum Female Democrat Current US State Representative	Yes, high concern	It is both a public health and national security issue	Direct - supports renewables	Does not see a gender gap among Minnesotans or in Congress
Carrie Ruud Female Republican Current MN State Senator	Unwilling to confirm or deny existence of climate change	Thinks that discussing climate change openly leads to unproductive arguments so refuses to do so	No public climate stance but supportive of renewable energy for air pollution, economy, and grid security. Concerned about	She thinks environmental issues in general are often taken up by women but did not want to speak directly about climate change

			protecting Minnesota's water	
Michelle Benson Female Republican Current MN State Senator	No	Cites changes in solar intensity and sunspots and says that humans think too highly of ourselves if we think we can change the climate of the planet	No climate belief but support of renewables for grid security and economics and support of energy conservation for fiscal reasons. Expresses concern about the major lifestyle changes it would take to address climate change as the left wants	Believes women in the legislature do have stronger environmental concerns than men. Notes that these issues are very partisan and women are better at working across the aisle
Bill Weber Male Republican Current MN State Senator	No	Thinks climate change is a political rather than scientific agenda by the political left	Anti-most environmental regulation and increased renewable energy subsidies	Doesn't think that men and women are very different in the ways that they govern


MN Senate Districts with Project Interviewees, 2017
Of the ten interviewees who participated in research about the impact of gender on legislators' climate change positions, six were current Minnesota Senators. They are shown on this map. Because climate change is a partisan issue, party and gender of all Minnesota Senators are shown by district.
Chris Eaton
District 40
Kari Dziedzic
District 60
John Marty
District 66
Carrie Ruud
District 10
Michelle Benson
District 31
Bill Weber
District 22
Gender and Party of Senator by District
Female Senator
Democratic Senator
Republican Senator
*Interviewee Shown by Photo
There are 67 Minnesota Senate Districts. Only 16 of the 67 seats are currently held by women. 34 Senators are Republican and 33 are Democratic (Democratic-Farmer-Laborer).
Cartographer: Isabella Soparkar, 4/2/2017
Data: MN Legislative Coordinating System
Projection: NAD 83, UTM Zone 15

Interviewees Who Are Not MN State Senators



Cartographer: Isabella Soparkar

Brief Interviewee Bios

One of the benefits of interviews as a research method is that it allows me to have a holistic view of a person rather than just viewing them as a data point. Though I am splitting up parts of people's interviews in order to help themes shine through, to provide context for the analysis that follows, I first offer a brief paragraph about each person to provide context both for their relevance to environmental policy-making and their individual personalities.

John Marty - Male Democrat

The best way I can think to describe John Marty is that he's a bow-tie wearing version of Bernie Sanders in the Minnesota Senate. Whenever I asked any Minnesota politicians who I should talk to for this project, John Marty's name was at the top of the list. He won the Sierra Club Environmentalist of the Year Award and at the time of our interview in March 2017, he served as the ranking minority member on the Energy and Utilities Finance and Policy Committee. With thirty plus years of service representing the 66th district, he's the second most senior person in the Minnesota Senate DFL.

Jim Nichols - Male Democrat

Jim Nichols is not perhaps your typical image of an environmentalist. Born, raised, and still farming in Lake Benton, Minnesota, at the age of 70, Nichols is a far cry from an urban tree-hugger. When I visited, he drove me around his 630 acres in a big white pickup truck while we talked. At the time, he was the talk of all the local coffee shops having just broken his county's yield record for corn (316 bushels an acre). No one had done that much corn per acre in living

memory in Lake Benton and he did it by using fewer fertilizers and strip tilling, both of which reduce the release of carbon dioxide into the atmosphere.

Nichols served in the Minnesota Senate from 1977-1982, resigning partway through his second term due to personal life necessity. He also previously served as Minnesota Secretary of Agriculture. He has been a climate and general environmental advocate for decades. When he was in the Senate, he helped pass renewable energy legislation that mandated renewables, ethanol, and wind.

Rick Hansen - Male Democrat

Representative Rick Hansen, a member of the Minnesota House and a minority leader of the Environment Committee, looks the part of a traditional politician. He represents District 52A and has served for over a decade. He doesn't sport bow-ties like John Marty, and he isn't confessing that he hates big government like Jim Nichols. However, like both other Democratic men before him, he expresses grave concern about climate change.

Al Franken - Male Democrat

The junior U.S. Senator from Minnesota, Al Franken is known for championing traditional Democratic causes. He is currently on the Health, Education, Labor, and Pensions (HELP) Committee; the Judiciary Committee; the Energy and Natural Resources Committee, and the Committee on Indian Affairs. He prides himself on having visited all 87 Minnesota counties and having talked with constituents all across the state. Outside of the Senate, he's famous for his prior involvement with *Saturday Night Live*.

Chris Eaton - Female Democrat

Senator Chris Eaton represents the 10th district of Minnesota. A career nurse, Senator Eaton initially became connected to politics when she was working in hospice, providing end of life care to the Senator from her district. When the Senator died, the Senator's sister asked Chris Eaton to run for the empty Senate seat because of the amount of compassion she showed as a hospice nurse. Watching her tell the story, I could see her getting emotional about it, even years later. Now, Senator Eaton prioritizes compassionate healthcare policy in her work in the Senate. In addition to her healthcare advocacy, Senator Eaton is currently the ranking minority member on the Environment and Natural Resources Policy and Legacy Finance Committee.

Kari Dziedzic - Female Democrat

Senator Kari Dziedzic, representing Minnesota's District 60, is a DFL woman who believes in climate change and thinks a lot about its local impacts, but also is very concerned by the future of Minnesota's water. Prior to joining the Minnesota Senate, she was involved with more local forms of government, and she holds a degree in mechanical engineering. Currently, she is the Ranking Minority Member on the Agriculture, Rural Development, and Housing Finance Committee. She also serves on the Environment and Natural Resources Finance Committee.

Betty McCollum - Female Democrat

Representative Betty McCollum is the federal representative for Minnesota's 4th district (a section of the Twin Cities). Currently, Representative McCollum is the Ranking Democrat on the Interior Environment Subcommittee. She also serves on the Defense Subcommittee, as a member of the House Appropriations Committee.

Carrie Ruud - Female Republican

Senator Ruud knows what she thinks and is comfortable asserting her viewpoints. Her district, District 10, has many lakes, and so Senator Ruud makes water protection a legislative priority. In addition to environmental issues, Senator Ruud is passionate about women in the legislature. She's the current President of the National Foundation for Women Legislators. In the Minnesota State Senate, she serves, among other committee appointments, as the Chair of Environment and Natural Resources Policy and Legacy Finance and the Vice Chair of Environment and Natural Resources Finance.

Michelle Benson - Female Republican

Senator Benson spoke to me from her car on a Friday afternoon, while driving to pick up her children from school. Her experience in the Minnesota Senate representing Minnesota's 31st district shone through in her question-answering style. Her voice was extremely measured and patient, and her response approach was methodical. There were several questions I asked that she felt she couldn't answer fairly and so she asked me to move to the next question. Currently, she serves as the Health and Human Services Finance and Policy Chair, but in previous legislative sessions she served on the Energy and Environment Committee (which has since been split into

separate committees, one for energy and one for environment). She grew up on a farm and said that the main thing she learned from that experience was "you have to respect the land."

Bill Weber - Male Republican

Senator Weber was the only Republican man out of the dozen I reached out to over the course of several months who was willing to talk with me. For that, to him and to his legislative assistant, I am extremely grateful. Of all my interviewees, he was the only one who read the consent form thoroughly. He represents Minnesota Senate District 22, Luverne, and currently serves as the Agriculture and Rural Development Committee Chair and the Environment and Natural Resources Legacy Finance Committee Vice Chair.

Qualitative Analysis

Though the interviews are intended as case studies and not statistically significant data points, several themes emerged across the set.

Women are "Collaborative" and "Climate/Environment-Oriented"

Women Believe They Are More Collaborative

Of the women I spoke with, all but Representative McCollum mentioned that they believe women tend to be more collaborative than men. Several female interviewees suggested that collaborative tendencies position women well to be leaders on an extremely partisan issue like climate change. However, female interviewees spent significantly more time speaking about

the collaborative nature of women in the legislature as a general concept than about women and environmental issues, specifically.

Senator Benson believes that women do govern differently than men and tend to be a little more environmentally-oriented. “I think women take a more empathetic approach...I think it’s just a difference of having thousands of years in our culture to be really social,” she speculated. Though climate and environmental issues can be extremely partisan, Senator Benson thinks that women are well-equipped to bridge those gaps. “I think women tend to see both sides...whereas men will be on one side or the other and be harder to move to one side or the other.” At the end of our interview, she actually thanked me for doing this project, even though she is a Republican who does not believe in climate change, because she feels that there aren’t enough conversations happening across the aisle about environmental issues.

Like Senator Benson, Democratic Senator Eaton sees women as more collaborative and bipartisan than men, which is crucial when working on an issue as deeply partisan as climate change. She cited her own “unusual number of bills that are bipartisan” as evidence, and explained that she once gave away a bill she wrote to her Republican colleague Julie Rosen because doing so “increased from a 20-80% chance that it would pass.” Senator Eaton observes that part of this gender divide relates to age. Women often join the Senate at younger ages than men, and so are less stuck in their ways and more flexible. She thinks that women in the legislature tend to be more concerned about climate change than men.

Unlike Senator Eaton, Senator Ruud did not have a strong opinion about whether or not climate is a women’s issue. This is partially due to the fact that she did not want to dwell on the words ‘climate change’ during the interview. However, she did say that she believes

environmental issues in general tend to be taken up by women because mothers are often responsible for taking their children outside to play.

In addition to environmental issues, Senator Ruud is passionate about women in the legislature. She's the current President of the National Foundation for Women Legislators. She sees this as a prime example of women's capacity for collaboration. First, women try to mentor other women, something Senator Ruud thinks should happen more because "there's a real old boys' club in politics." Second, the women draft legislation together and share legislation that has worked in one state with legislators from another. She thinks this works because "women just want to get the job done, we're not so focused on getting credit." She's proud of the work the Foundation has accomplished merely by collaboration between its members. "That's what women do, we just find solutions."

Though the Republican women, Senators Benson and Ruud, were unwilling to comment directly on women and climate change as Democratic Senator Eaton did, since neither of them believe in climate change, both mentioned that women are more environmentally-oriented in the legislature than men. Overall, women focused heavily on discussing their general collaborative, bipartisan capacity.

Men Refer to Women as Collaborative Environmentalists

The male legislators also highlighted women's collaborative prowess. Interestingly, they portrayed women as both climate and environmental sympathizers much more strongly than women portrayed themselves.

Men described women as collaborators and compromisers. When I asked Mr. Nichols why we're moving so slowly in politics, he laughed. "The first problem is you've got too many men there…and men know everything. How can you get someone to change their mind when they already know everything?" He told me that some of his best colleagues in the Senate were the women because they were typically more open to compromise than the men. Senator Marty was on a similar page about women's legislative behavior, saying, "this is a gross overstatement, but women tend to be more collaborative, less egotistical," so they are more willing to consider working across the aisle. He thinks that having more women in the Senate would be beneficial, and not just because of climate change politics.

Though none of the men believe that a gender gap is the main determinant of climate change belief and concern in the legislature, all but one agree that it exists.

In terms of his colleagues who are active on climate change issues, Senator Marty doesn't see a strong gender gap, but concludes that men and women are slightly different. He attributes the gender gap on environmental issues in the American citizenry to the fact that women are on average better educated than men. He thinks that among Minnesota Senators, women do tend to be slightly more concerned about climate change on average, but that gender is a much smaller factor than party and geographic region of origin. Mr. Nichols believes that women are naturally more concerned about climate change than men are because they care about "their kids and their families."

Representative Hansen speculates that a lot of climate denialism is based in "very primal education" and women are socialized to treat nature differently than men. Generally echoing the famous argument made by Lynn White Jr. in his essay "The Historical Roots of Our Ecological

Crisis," Representative Hansen suggested that some people raised with Christian values are taught to have "dominion over the garden" and this leads to environmental degradation. In contrast, he believes others are raised to have "stewardship over the garden." Representative Hansen thinks a "more patriarchal upbringing leads to dominion" and as a result, women are more inclined towards stewardship than men are. Women are often suppressed by patriarchal systems, as previously discussed in the context of the psychology of system justification, and therefore less likely to take a dominion approach. Representative Hansen explained that he has observed this gender gap on climate and other environmental issues in the Senate, saying, "women tend to be early adopters more than men," and women are more willing to believe in things they can't see, such as climate change, than men are.

Speculations among men as to why women care more about climate change than men in the legislature ranged from education gaps to families to childhood socialization, but all agreed that women are predisposed to care more than men about climate change. The reasons as to why women may care more actually connect back to much of the literature on the environmental gender gap discussed in the first section of this paper. Overall, the men spent much more time telling me that women care about climate change, and why they believe women do, than the women themselves. The one exception to this was Senator Weber.

Senator Weber didn't see any gender component to concern about climate change or other environmental issues among Minnesota Senators, and he seemed very surprised by the question. In general, and not just in terms of climate or environmental issues, he did not think that men and women behaved significantly different. "We're all senators...I don't think about whether they're approaching it from a female or male perspective," he told me. I think that this

answer may have in part been an effort to avoid appearing sexist because some schools of thought teach that men and women should be treated and viewed as exactly the same, while other, often progressive, ideologies teach that the differences between male and female experiences should be studied and recognized. Senator Weber's perspective is the outlying one, and contradicts much of the political psychology of gender literature.

Men are the Extremes and Women are the Middle

The belief of interviewees that women are more collaborative, especially on climate and other environmental issues, was supported by interviewee perspectives on climate change. Men tended to voice the extremes - either climate change as a central concern or a complete impossibility - while women took stances closer to the middle.

The male climate believers were more alarmist than the women. "I believe the science, I believe that we're in a very precarious moment," Representative Hansen said plainly. He thinks that combatting climate change is a race to the finish because every day that goes by, more greenhouse gases are pumped into the atmosphere. Senator Marty also sees climate change as the major crisis of our time, worrying that not enough people see clearly what needs to happen moving forward on climate and on other progressive issues that he cares about. "We as a society are visionless" he concluded, though he went on to say that he thinks there is some hope for a better future, or else he wouldn't be in politics trying to change things. Like Senators Hansen and Marty, Mr. Nichols has been a climate and general environmental advocate for decades. When he was in the Senate, he helped pass renewable energy legislation that mandated renewables, ethanol, and wind. Now retired from the Senate and back on his farm, he spends every day trying

to lower the climate and environmental impact of his farm because he thinks that climate change is a disaster for the whole planet, as do the other Democratic men.

At the opposite end of the climate change spectrum, sits Republican Senator Weber, equally fervent about his climate position. Senator Weber acknowledged that there are changes in the climate but doesn't believe they are anthropocentric. I asked why he thinks people would be so vocal about an issue that he thinks is overblown, and he responded that, "I think it's more based on a political agenda than a scientific agenda...the scientists who disagree aren't being given voice… the Al Gores of the world thought that they could gain political achievement." Overall, his opinion of anthropogenic climate change was deep skepticism, and he questioned the motives of others who are outspoken about it. Despite disagreeing in substance with the Democratic men, Senator Weber was equally vehement.

Though the women have positions on climate change, they tended to be less forceful about their viewpoints than the men. On the Democratic side, Senator Dziedzic and Senator Eaton both told me they believed in climate change and were worried about it, but they did not frame it as the most crucial problem they currently face. They considered the climate change problem alongside other environmental, health, and national security issues, rather than fixating on it as the central problem, as their male Democratic colleagues did.

On the Republican side, women also seemed more compromising. Senator Benson does not believe in climate change. However, when I asked about what she thinks about people on the other side of the aisle who feel differently than she does about climate change, Senator Benson was very respectful though she disagrees with their perspective: "Senator Marty lives his life

consistently. He practices what he preaches and I respect him because he lives so consistently," she said.

When I asked Senator Ruud about her opinion on climate change, she said gets asked that all the time and she won't tell anyone whether she believes it or not. She thinks that the conversation around climate change changed in the early 2000s and that it is less prevalent in the legislature than the press makes it out to be. "I think we spend a lot of time talking about it and get tired of the question," she said firmly. "Instead [of asking who believes it], we should ask ourselves, 'What should we do about something we have now and figure out how to make things better for future generations?'"

Because the women seemed to gravitate towards the middle, with the drive and pressure to collaborate superseding any existing natural soft spots towards climate change, the Democratic women actually displayed less climate change concern and focus than their male colleagues. However, the Republican women, also moving towards the middle, were surprisingly amenable to climate change action given the general stance of their party and their own climate change values.

Republicans on Climate Solutions

One of the main suggested solutions to climate change, renewable energy, is often opposed by members of the Republican party who are climate deniers. However, both Republican women I spoke with supported renewables for non-climate reasons, while the male Republican did not. These are obviously individual opinions rather than statistically significant results, but are interesting in the context of the interviewee anecdotal evidence and political

science literature that show women to be more collaborative and open-minded than their male political colleagues.

Senator Dziedzic is not convinced that climate change it is a gender issue, but she thinks that "there are some women while they might not freely say they've believed in climate change, they've agreed on things that are impacting the environment." She believes that while there are many women who work on environmental issues, the geographic region and the party they represent impact the way they approach the topic. All female legislators may not give broad statements about the ocean rising, but they still work to bring renewable energy to their districts. She implied that female Senators, particularly Republicans, often skirt around climate change as a concept while still addressing the environmental issues they care about and implementing climate solutions.

The Republican female senators Benson and Ruud exemplify this. Despite not seeing climate change as a problem that currently needs to be addressed, Senator Benson thinks there is a place for renewable energy. She spoke about the role of rooftop solar on individual homes and schools as a step on the path towards "energy independence" and said that she thinks being non-dependent on the grid is smart in an age of cyber attacks and general grid vulnerability. She even considered getting solar shingles on her own roof because of the long term economic benefits and the stability benefits of not having to rely on the grid as a whole. "There is a significant overlap between people who are fiscally conservative [and people who think renewables are a good idea]," she laughed.

Even though Senator Ruud was unwilling to take a stance on climate change, she also thinks renewable energy makes sense. She's interested in a full energy portfolio, including solar

and wind, but also potentially nuclear and hydroelectric sources as well. “A portfolio of power is really powerful,” she grinned. About fossil fuel inclusion in that portfolio, she said, “If we do use coal, let’s make it the cleanest option.” Her district, District 10, mostly has small energy co-ops providing power, rather than large scale utilities. She’s proud to say that they have all exceeded their renewable energy goals, and wants to make sure that while she promotes renewables, she doesn’t put standards on the co-ops in her district that they won’t be able to realistically meet in the future. The other progress on energy that she’s excited about is energy efficient homes because they both save energy and save families money.

Both the Republican women support renewables because they have benefits besides addressing climate change, showing a political flexibility. In contrast, the sole male interviewed, Senator Weber, did not support increasing renewable energy mandates, saying that the renewables industry has matured enough to stand on its own feet and that giving it more help is unfair to other energy producers and to consumers. He does not represent all Republican men of course, but this case study suggests that perhaps women are more willing to support climate projects across the aisle, even if their motive is not to address climate change.

Political Party and Climate Change

Regardless of any gender differences, political party is the most salient determinant of climate change political behavior. None of my Democratic interviewees denied climate change, and none of my Republican interviewees agreed that it exists and is anthropogenic. However, many interviewees believe that neither party is as solid on their official climate change position as onlookers may think.

Many Democrats know Republicans who realize anthropogenic climate change exists and yet are unwilling to publicly admit it. Senator Marty says he knows many Republicans, often women, who recognize anthropogenic climate change is occurring but refuse to say so because of the extreme partisanship around this issue. Mr. Nichols agrees, saying more bipartisan work would have been possible during his time in the Senate if the Republicans hadn't met as an entire caucus to discuss climate issues. He, like Senator Marty, thinks many Republicans hold more environmental perspectives than their party as a whole.

Senator Franken said ruefully that "Everyone in the world knows there's climate change, except for Republicans in the U.S." He continued, "I don't have colleagues on the other side that are willing to admit that [climate change] is true...even though most of them know it is." Similarly to Senator Marty and Representative Hansen, he blames much of this inaction on fossil fuel money in politics. He thinks that many Republicans are afraid to come out on climate change because of the potential re-election ramifications and justify that by telling themselves "if I don't get re-elected there will be a worse person here." Senator Franken did not have much patience for this approach, sharing with the audience, "I had a Republican colleague say to me once...the easiest person to fool is yourself."

Representative McCollum attributes lack of action on climate change to the fact that "the partisanship is so poisonous in Washington." She serves on the Defense Subcommittee and gave an example of a time when Republicans refused to even consider climate change in the context of national security, an issue that the Republican party typically is very swayed by. In the future, she hopes to see a bipartisan caucus on climate change to talk about it in the context of national security. To her, it doesn't make sense that Republicans continue to ignore climate change. She

told the town hall meeting I attended, “87% of Americans and 78% of Republicans support action on climate change.” And then added on a lighter note, “I have to say, when I disagreed with my science teacher about the answer on the science test, it did not go well for me!”

But it’s not just Republicans being blamed for being two-faced on climate change. Democrats also stated that not all of the members of their party believe in climate change or take strong enough action on it. According to Representative Hansen, “there are some rural Democrats who don’t believe it.” He says that the Minnesota Senate had a greater consensus that climate change was real ten years ago and attributes this change to the increasing involvement of the fossil fuel industry in politics. He calls policymaking that ignores climate change “nostalgia-based policymaking” and thinks that we should implement a carbon tax because “ultimately, if you want to move policy you have to move taxes.” Senator Marty also takes issue with many Democrat’s positions, saying “I would fault Democrats in high places” for not doing enough about climate change. All of his Democratic colleagues in the Minnesota Senate will say that climate change is real and caused by humans, but he thinks that not many of them are doing enough to address it. He also thinks that Democrats need to be more explicit about climate change as a motivation for certain bills, arguing that this is particularly an issue with renewable energy, where the focus is often on jobs and economics. “I want us to talk about the climate with renewables, not just dance around it,” Senator Marty explained. This is part of his broader complaint that the modern progressive movement is not progressive enough. He joked that if the progressives of today were the progressives of the Civil Rights Era, “we’d still have slaves, but they’d have forty hour work weeks.”

Though climate change concern and action is clearly not solely determined by party, I experienced the partisanship on climate change firsthand while scheduling and conducting interviews for this project. Republican men was by far the hardest category in which to achieve interviews, and I only ended up with one. I reached out to many legislators who never answered my calls, some who cancelled the day before, and some who had legislative assistants who were very confused by my request because climate change is such an incredibly partisan issue. This became clear from the first day I walked into the Republican caucus in the Minnesota state senate building to schedule a few interviews, having already learned that phone calls were not an effective scheduling tactic for Republicans.

I approached a legislative assistant's desk. "I'm doing research on the influence of gender on climate change policy development and I'd like talk to Senator [name redacted] about climate change policy," I said. The legislative assistant seemed baffled. "What would Senator [name redacted] know about that?" the assistant asked. I cited the committee service that I felt qualified the Senator for participation in my study. The legislative assistant's blank look persisted. "About *climate change*?" the legislative assistant said loudly. I felt all of the heads in the immediate vicinity turn towards us. Apparently, and perhaps unsurprisingly, 'climate change' is not a phrase spoken often in the Republican Senate caucus. This was not the only well-meaning legislative assistant that was bewildered by my request, even though some of the Republicans are open-minded about climate change, because the party culture around it is so strong.

Partisanship is the main obstacle to climate change action and consensus, but there's hope in the fact that political insiders know many people don't actually agree with their party's line on climate change. Given the previous discussion of women as collaborative on climate change,

women could be an important part of the puzzle to breaking down the obstruction of partisanship on climate change. To further than conversation, it's useful to understand why female legislators may be concerned about climate and environment.

Women's Concern Has Different Roots

Women Care About Non-Climate Environmental Issues

The men I spoke with who believe in climate change and care about protecting the environment in general all focused on climate change above other environmental problems. For example, despite all of the environmental issues Senator Marty cares about and works on, he says, "you have to put climate first because it's the future of the human race." Climate change was discussed by the men as a discrete issue.

The women prioritized climate change less than the men and often framed it within the context of other environmental issues, such as water. Senator Eaton stated, "I would have to say water [is the most concerning of all the environmental issues I care about]...running out of it and polluting it." She is also, understandably, given her background as a nurse, especially focused on environmental issues that have direct health impacts. Senator Dziedzic framed all of her climate change concerns in the context of water, talking about drought, flooding, and water pollution. For the Democratic women, climate change is just part of a bigger environmental puzzle.

The Republican women proved that they can be environmentally-minded without believing in climate change. "I come from a district that has over 800 named lakes," Senator Ruud said proudly. "Water really is the basic necessity we have." She fondly described her morning walks on the Mississippi River, complaining that she rarely sees other people out

enjoying nature. “Take time to listen to the Earth, it tells you a great story,” she encouraged me. She thinks that we need to improve children’s education about the natural world by getting them outside to play so that they value and protect it as the become adults. Senator Benson also has a lot of non-climate environmental concerns. She grew up on a farm and said that the main thing she learned from that experience was “you have to respect the land.” She explained, “I was fortunate to be raised by parents who grew up relatively poor....don’t waste things.” She told stories about being taught to turn off lights when leaving a room and to never leave the water running. She recalled one instance when her father told her not to tie tomatoes with new twine and to instead use old twine because it was going to rot off anyway, so tying tomatoes with the new twine would have been a waste. She said that this waste-not-want-not attitude is still part of her life, however ,“I would never impose that on someone.” Then she laughed and added, “Well, I will impose it on my children.” Though they are not textbook environmentalists because of their lack of climate change belief, like their Democratic counterparts, Republican women have environmental concerns.

In contrast, Senator Weber was focused on what he sees as overly powerful environmental regulation. He told me he was concerned about the Minnesota Pollution Control Agency (MPCA) and the Department of Natural Resources (DNR). “Some of the many concerns that I have as relates to those two departments is sometimes the degree of regulation...they tend not to be overly understanding of the world, like business and agriculture and constituents,” he explained. He told a story about one of his constituents who had come to complain about an interaction with the MPCA. The constituent had filed for permission to build a wastewater lagoon for his business and the MPCA had requested soil testing after he had already poured the

bentonite clay base layer of the lagoon. Senator Weber thought this was very poor communication, saying that he understood the need for soil tests but that "you should know what they need before you get to that point."

He was also concerned that environmental regulations sometimes implicate and blame farmers for polluted water because of fertilizer runoff from fields. He mentioned the numerous difficulties farmers face, saying, "Production agriculture faces a lot of challenges and yet we have the responsibility to feed the state and the world." He mentioned that environmental groups and organizations sometimes act as though farmers want pollution, stating, "I tend to resent the implication at times that farmers want dirty air and dirty water." Overall, Senator Weber was wary of environmental regulation and environmentalists in a way that his female colleagues were not.

Climate change is not the only environmental issue at stake. Among interviewees there seems to be a stronger gender gap on environmental issues in general than on climate change in particular. Women's concern about climate change seems to be tied to broader environmental concerns, while for men climate change is a much more standalone issue. This ties directly back into the literature on the environmental gender gap.

Climate Impacts: Women Local, Men International

Within concern about climate change, men interviewed seem to have much bigger picture concerns, while women often relate climate impacts back to their local communities. This finding is unsurprising given that the literature review revealed much of women's environmental and climate advocacy takes place at the local scale.

When asked what the most problematic climate change impacts are, men respond with global answers. John Marty is worried about the impacts that will happen not in the next 10 years, but those that will occur in the next 15-20 years. He thinks that the most vulnerable populations globally, people who already struggle in life, will be hardest hit, and he also is concerned for coastal populations because of sea level rise. Representative Hansen is most concerned by ocean acidification, decreased crop production, water salinization, and increased conflicts over resources. Though he recognizes that Pacific Islanders will face the first impacts, as they will have to leave their homes due to sea level rise, he thinks that the issues of climate change should be of concern to everyone on the planet because many other groups will also be impacted.

The women I spoke with tied climate change much more directly to their own communities. Though climate change is not Senator Eaton's number one environmental concern, she does believe in it and thinks we need to address it. She cares especially about the changes in weather patterns and rainfall in Minnesota, seeing increased Minnesota rainfall (a climate change impact) as a major problem because it washes away soil and changes groundwater amount and composition. She then moved beyond her local community to acknowledge that climate change has many other problematic impacts: "[Climate change is] everything from a national security issue to a public health issue to a water and land management issue...there's really nothing that it doesn't encompass." Broadly, she's worried about people living on coasts around the world because of sea level rise and she's worried about "people in poverty" because they always suffer most and first from any problem. Though Senator Eaton has international climate change concerns, she started off framing the problem within her local community.

Senator Dziedzic took a similar approach, grounding her broader opinions in her local community. “I think it’s real, I think it exists,” she said emphatically of climate change. “You just have to look at the changing weather patterns.” She explained that her district used to get “light rain days” but now it’s a “deluge” or nothing. These unusually heavy rains have had direct impacts on people in Minnesota. For example, the rain has caused localized flooding and mudslides. It has also increased fertilizer runoff from farmland, dumping more nitrogen and phosphorous than usual into Minnesota’s waterways. Both of these fertilizers change conditions in water to be incompatible with fish life, so as rain and runoff increase, so do fish kills. On the flipside of the heavy rains, some Minnesotans have been experiencing drought. Senator Dziedzic told me, “they’ve had to go and dig multiple wells because they’re literally running out of water in Worthington.” To her, all of the climate change impacts are tied together with existing environmental problems. She wants to address climate change because of the immediate impacts on Minnesotans and because of the long term consequences. “People can’t go outside and breathe” because of particle pollution in the winter, she said sadly. A safe and stable climate is a matter of public health, and that concern starts in her district, similar to Senator Eaton.

Representative McCollum’s constituency base is broader because she’s a federal legislator, but she also took care to tie climate change concern back to communities. “Improving people's’ health is something that should be considered when moving forward to renewable energy options...the added bonus is to public health and that’s not talked about much because you can’t see someone walking around with asthma,” she said at a February 2017 town hall meeting in St. Paul, Minnesota. From there, she went on to explain that she cares about climate change both because it is a public health issue and because it is a national security issue. “The

Pentagon knows climate change is a real threat to our national security," she said clearly, referencing naval bases that are threatened by sea level rise and mentioning the predicted increase in global instability as resource shortages develop. In order to address climate change, she thinks the U.S. needs to stay in the Paris Agreement, an international accord that may be imperfect, but represents global consensus that we need to stop emitting greenhouse gases. President Trump has expressed a desire to leave the Paris Agreement, but Representative McCollum and others think that is not currently legally feasible. While explaining all this, Representative McCollum began with local health concerns and then built up to international policy.

Though Representative McCollum operates at a different scale than Senators Eaton and Dziedzic, all three women chose to ground their discussion of climate change within local community issues in a way that men did not. This observation ties back to much of the literature showing that women are more prevalent political actors at the local scale than at the state and federal scales because women are socialized to care for their communities.

Aggregation of Experiences

I am extremely grateful to all of my interviewees, and though my personal opinion is that we should listen to the 97% of climate scientists who tell us that climate change is real and we need to do something about it, I have a lot of respect for all of the legislators I spoke with. I know that they want the best for their constituents, it just happens that people have different ideas about what the best is. That, in many ways, is one of the great virtues of democracy.

Through these case study interviews, I observed Democratic men and women do not have

obviously different levels of concern about climate change. However, Democratic women were slightly more likely than men to talk about health as a justification for caring about climate change. They were also more likely to contextualize the climate change conversation within personal stories and stories about constituents, while men typically described climate change using many facts and pieces of scientific information. The men were more single-minded about climate change, seeing it as the major environmental problem we all face, while the women also discussed water and point source pollution as connected issues to climate change that we should also be concerned about.

I did observe a gender divide among Republicans on climate change. Though neither Republican group was willing to admit concern about anthropogenic climate change, the Republican women were more willing to meet to discuss it in the first place and less vehement about their opinions. They were also supportive of climate change solutions such as renewable energy for economic reasons. Republican women had more traditionally liberal views on other types of environmental protection than Republican men, with the women wanting to protect water sources and the man wanting to deregulate as much as possible. It seems as though, in this very limited investigation, among Republicans, women are slightly more open to climate conversations than men and much more open to talking about other environmental issues. Since typically, I would expect that people who are concerned about environmental issues in general would also be concerned about climate change, I attribute Republican women's split on this to the extreme partisanship around climate change policy right now in the U.S.

Overall, women interviewed were more concerned about the environment, if not climate change, than their male counterparts. This concern frequently enabled them to support climate

solutions, even if for reasons other than climate change. Women's concern was also often rooted in local communities. These findings are substantiated by the literature on the environmental gender gap.

Conclusion

The clearest finding of my research is that the gender gap on climate change is not expressed by legislative officials to the same extent that it is by citizens. This was shown both in the quantitative and qualitative sections. The quantitative section demonstrates that influence of gender on climate bill voting and proposing practices is not significant. The qualitative section sheds some light on this result, suggesting that gender may have some influence on legislators' climate change positions, though it is so overridden by party influence that it is not expressed in political actions. This finding is in contrast to what was suggested by the literature and my initial hypothesis that the climate gender gap would be present among political leaders because there is a gender gap in the public and other gender gaps in the public tend to carry over into legislatures.

Why then does the quantitative analysis show that the climate gender gap does not carry over into the legislature? While interviewing legislators, I realized the magnitude of the political pressure to toe the party line on climate. That pressure is felt by both Democrats and Republicans. Within both parties, there was a spectrum of concern or denial on climate, with some people clearly more invested than others. I heard frequently from Democrats that many Republicans believe in climate change but feel they cannot say so, and that there are Democrats who do not think it is a big problem, but feel party pressure not to admit that openly. The quantitative analysis cannot pick up these subtleties of opinion, but they matter because they show that some characteristics, such as gender, may be more susceptible to outside influence and constituent pressure on climate change action.

This pressure from the Republican party to deny and ignore climate change seems only to be growing. When President Obama attended the Paris Climate Conference, Republicans in

Congress informed him before he left that they would not sign on to any climate treaty. President Obama joined the Paris Agreement without their support, but now, President Trump is strongly considering withdrawing the US from the historic agreement, even while facing pressures from other nations, including China and the EU, to stay in the agreement and fulfil the US' promised carbon emission cuts. Even if the U.S. remains in the Paris Agreement, amid calls to revitalize coal mining in the country, the likelihood of any notable climate action is extremely low. This is a major problem for the globe because climate change cannot be properly addressed without the help and input of the country with the highest per capita greenhouse gas emissions and second highest total greenhouse gas emissions. That is not to say that every Republican political leader is against addressing climate change, but many of those in Congress are supporting Trump's dismissal of the Clean Power Plan, which was the one promise the US made at the Paris Summit. For those of us concerned about climate change and all of its impacts – rising sea levels, increased natural disasters, changing weather patterns, etc. – the future looks bleak.

And yet, I think there is hope. My research shows that making progress on climate policy will require breaking down partisan pressures. I started this project because I'm interested in women in politics, and I'm worried about climate change. I thought I might find that electing more women from both parties to office would result in greater climate change action from the US government. The quantitative data does not support this claim. However, through the qualitative analysis I found that women could play a role in climate solutions in a different way than I'd originally believed.

In the literature review of this thesis, the climate gender gap and environmental gender gap were discussed separately because the bodies of literature are separate, but I see them as

connected. The environmental gender gap is larger and stronger than the climate gender gap, both in the public and among political leaders. My findings suggest that we may be able to draw on the environmental gender gap among politicians to further climate change policy by breaking down partisanship. Because female Republicans are much more openly concerned with environmental quality issues than Republican men seem to be, there is potential for them to become climate actors, as long as climate change is contextualized within their existing environmental frameworks. It seems counterintuitive, but I think that in many cases, talking about climate change solutions in the context of other environmental benefits and avoiding the language 'climate change' could help sway Republican women to make pro-climate votes without damaging their standing within their party. While the scientific facts about climate change need to be part of political discourse, the strategic reframing of climate issues as environmental issues could help convince more women in politics to support climate solutions.

Additionally, given that the literature suggests women are more active at the local scale on environment and climate issues, and that all of the women I interviewed tied climate change and other environmental problems back to their local communities, framing global problems locally may be a way to get the support of female legislators for climate change policy.

Because party is such a strong predictor of climate change policy performance, analysis on climate change decision-making often stops there. Moving forward, I think that needs to change. The qualitative case study interviews in this project suggest that party may be less overarching than believed by the general public, so smaller factors matter more. I hope that in the future, more research will be done on gender, as well as other factors such as race, class, and urban or rural origin. I recommend that this research be done both at the state and federal levels,

using both quantitative analysis and qualitative analysis since one type of research can shed light on the results of the other. Stopping at party is not helpful because that ignores the possibility to better understand how to change politicians' opinions. The better that climate change policymaking motivations are understood, the more likely it is that those of us concerned about climate change can lobby effectively for the policies we need to protect our planet and ourselves. We need to make large strides on climate change policy, now more than ever.

Appendix 1: Legislation Considered

8 SENATE CLIMATE BILLS CONSIDERED

Bill/Amdt./Resolution	**Action**	**Pro-Climate?**
On the Motion to Table S.Amdt. 99 to S.Amdt. 2 to S. 1	tabled in Senate	n
On the Motion to Table S.Amdt. 24 to S.Amdt. 2 to S. 1	tabled in Senate	n
S.Amdt. 58 (Schatz) to S. 1: To express the sense of Congress regarding climate change.	failed in Senate	y
S.Amdt. 87 (Hoeven) to S. 1: To express the sense of Congress regarding climate change.	failed in Senate	n
S.Amdt. 777 (Sanders) to S.Con.Res. 11: To establish a deficit-neutral reserve fund to recognize that climate change is real and caused by human activity and that Congress needs to take action to cut carbon pollution	failed in Senate	y
S.Amdt. 1014 (Bennet) to S.Con.Res. 11: To establish a deficit-neutral reserve fund relating to responding to the economic and national security threats posed by human-induced climate change, as highlighted by the Secretary of Defense	agreed in Senate	y
S.Amdt. 836 (McConnell) to S.Con.Res. 11: To establish a deficit-neutral reserve fund relating to the regulation by the Environmental Protection Agency of greenhouse gas emissions, which may include a prohibition on withholding highway funds from States	agreed in Senate	n
S. 1: Keystone XL Pipeline Approval Act	passed in Senate	n

55 PRO-CLIMATE RELATED PIECES OF LEGISLATION CONSIDERED

code	name	introduced by	gender	party	status
S.601	ACCTION Act of 2015	Heidi Heitkamp	F	D	no vote
S.1306	Energy Independence Investment Act of 2015	Joe Manchin	M	D	no vote
S.AMDT.99	Ammend S.AMDT.2 to S.1	Joe Manchin	M	D	tabled in Senate (1/22/2015)
H.AMDT.253	Would amend H.R.1806	Donald Beyer	M	D	failed in House (5/20/2015)
S.1241	Enhanced Grid Security Act of 2015	Maria Cantwell	F	D	no vote
S.1243	Grid Modernization Act of 2015	Maria Cantwell	F	D	no vote
S.1256	Advancing Grid Storage Act of 2015	Al Franken	M	D	no vote
S.1258	Local Energy Supply and Resiliency Act of 2015	Al Franken	M	D	no vote
S.1263	Clean Energy Technology Manufacturing and Export Assistance Act of 2015	Mazie Hirono	F	D	no vote
H.R.70	Deficit Reduction, Job Creation, and Energy Security Act	Shelia Jackson Lee	M	D	no vote
H.R.258	Half in Ten Act of 2015	Barbara Lee	F	D	no vote
H.R.291	Water in the 21st Century Act	Grace Napolitano	F	D	no vote
H.R. 761	Berryessa Snow Mountain	Mike Thompson	M	D	no vote

	National Monument Act				
H.R. 996	Northern Rockies Ecosystem Protection Act	Carolyn Maloney	F	D	no vote
H.R. 1175	Clean Energy Technology Manufacturing and Export Assistance Act of 2015	Doris Matsui	F	D	no vote
H.R.1275	Climate Change Health Protection and Promotion Act	Lois Capps	M	D	no vote
H.R. 1276	Coastal State Climate Change Planning Act	Lois Capps	M	D	no vote
H.R. 1278	Water Infrastructure Resiliency and Sustainability Act of 2015	Lois Capps	M	D	no vote
H.R.1464	Inclusive Prosperity Act of 2015	Keith Ellison	M	D	no vote
S.741	Water Infrastructure Resiliency and Sustainability Act of 2015	Benjamin Cardin	M	D	no vote
S.1160	Public Lands Service Corps Act of 2015	Tom Udall	M	D	no vote
S.AMDT.115	Amend S.AMDT.2 to S.1	Christopher Coons	M	D	failed in Senate (1/28/2015)
S.AMDT.174	Would amend S.AMDT.2 to S.1	Jeff Merkley	M	D	no vote
H.R.1898	America Competes Reauthorization Act of 2015	Eddie Bernice Johnson	F	D	no vote
H.R.1961	To authorize the National Oceanic and Atmospheric Administration to establish a Climate Change Education Program	Mike Honda	M	D	no vote

H.R.2269	Wildlife VET Act	Alcee Hastings	M	D	no vote
H.Res.67	Expressing support for designation of February 12, 2015, as "Darwin Day" and recognizing the importance of science in the betterment of humanity	James Himes	M	D	no vote
S.Res.66	Expressing support for designation of February 12, 2015, as "Darwin Day" and recognizing the importance of science in the betterment of humanity	Richard Blumenthal	M	D	no vote
S.AMDT.58	Would amend S.AMDT.2 to S.1	Brian Schatz	M	D	failed in Senate (1/29/2015)
S.AMDT.87	Would amend S.AMDT.2 to S.1	John Hoeven	M	R	failed in Senate (1/21/2015)
S.AMDT.1014	Would amend S.Con.Res.11	Michael Bennet	M	D	agreed in Senate (3/26/2015)
S.AMDT.944	Would amend S.Con.Res.11	Bill Nelson	M	D	agreed in Senate (3/26/2015) but ruled out of order by chair
H.R.2177	Energy Savings and Industrial Competitiveness Act	David McKinley	M	D	no vote
S.128	Energy Efficiency Improvement Act of 2015	Rob Portman	M	R	no vote
S.535	Energy Efficiency Improvement Act of 2015	Rob Portman	M	R	Action: 3/27/2015 Passed Senate; 4/21/2015 Passed House; 4/30/2015 Signed by the President and became public law No. 114-11. Related Bill(s): H.R.2177, S.128, S.535, S.259, and S.720.
S.720	Energy Savings and Industrial Competitiveness Act	Rob Portman	M	R	no vote

S.AMDT.3	Would amend S.AMDT.2 to S.1	Rob Portman	M	R	agreed in the Senate (1/20/2015)
H.R. 222	To prohibit the Export-Import Bank of the U.S. from providing financial support for certain high carbon intensity energy projects	Jared Huffman	M	D	no vote
H.R.597	Reform Exports and Expand the American Economy Act	Stephen Fincher	M	R	no vote
H.CON.RES.6	Expressing the sense of Congress that the U.S. should provide, on an annual basis, an amount equal to at least one percent of U.S. gross domestic product (GDP) for nonmilitary foreign assistance programs.	Barbara Lee	F	D	no vote
H.CON.RES.29	Recognizing the disparate impact of climate change on women and the efforts of women globally to address climate change.	Barbara Lee	F	D	no vote
S.585	American Natural Gas Security and Consumer Protection Act	Ed Markey	M	D	no vote
S.1215	Methane Hydrate Research and Development Amendments Act of 2015	Lisa Murkowski	F	R	no vote
H.R.201	Community Parks Revitalization Act	Albio Sires	M	D	no vote
H.R. 1971	To reduce greenhouse gas emissions and protect the	Ted Lieu	M	D	no vote

	climate				
H.R. 2113	Federal Employees Sustainable Investment Act	James Langevin	M	D	no vote
H.R.2177	Energy Savings and Industrial Competitiveness Act	David McKinley	M	D	no vote
S.128	Energy Efficiency Improvement Act of 2015	Rob Portman	M	R	no vote
S.535	Energy Efficiency Improvement Act of 2015	Rob Portman	M	R	Action: 3/27/2015 Passed Senate; 4/21/2015 Passed House; 4/30/2015 Signed by the President and became public law No. 114-11. Related Bill(s): H.R.2177, S.128, S.535, S.259, and S.720.
S.720	Energy Savings and Industrial Competitiveness Act	Rob Portman	M	R	no vote
S.AMDT.3	Would amend S.AMDT.2 to S.1	Rob Portman	M	R	agreed in the Senate (1/20/2015)
H.R. 222	To prohibit the Export-Import Bank of the U.S. from providing financial support for certain high carbon intensity energy projects	Jared Huffman	M	D	no vote
H.R.597	Reform Exports and Expand the American Economy Act	Stephen Fincher	M	R	no vote
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H.CON.RES.29	Recognizing the disparate impact of climate change on women and the efforts of women globally to address climate change.	Barbara Lee	F	D	no vote
S.585	American Natural Gas Security and Consumer Protection Act	Ed Markey	M	D	no vote
S.1215	Methane Hydrate Research and Development Amendments Act of 2015	Lisa Murkowski	F	R	no vote
H.R.201	Community Parks Revitalization Act	Albio Sires	M	D	no vote
H.R. 1971	To reduce greenhouse gas emissions and protect the climate	Ted Lieu	M	D	no vote
H.R. 2113	Federal Employees Sustainable Investment Act	James Langevin	M	D	no vote
S. 1144	Federal Employees Sustainable Investment Act	Sheldon Whitehouse	M	D	no vote
S. 1294	Bioenergy Act of 2015	Ron Wyden	M	D	no vote
S. 1340	COAL Reform Act of 2015	Ed Markey	M	D	no vote
H.R. 309	Gas Tax Replacement Act of 2015	Jared Huffman	M	D	no vote
H.R. 972	Managed Carbon Price Act of 2015	Jim McDermott	M	D	no vote
H.R.1027	Healthy Climate and Family Security Act of 2015	Chris Van Hollen	M	D	no vote
H.R.2202	Healthy Climate and Family	John Delaney	M	D	no vote

	Security Act of 2015				
H.R.198	MOVE Freight Act of 2015	Albio Sires	M	D	no vote
H.R.679	To establish a Road Usage Charge Pilot Program to study mileage-based fee systems, and for other purposes	Earl Blumenauer	M	D	no vote
H.R.779	Northern Virginia Metrorail Extension Act	Gerald Connolly	M	D	no vote
H.R. 1308	Economy in Motion: The National Multimodal and Sustainable Freight Infrastructure Act	Alan Lowenthal	M	D	no vote

Appendix 2: Bivariate Analysis Tables

On the Motion to Table S.Amdt. 99 to S.Amdt. 2 to S. 1

	Women	Men*
pro-climate vote	14 (70%)	32 (40.5%)
anti-climate vote	6 (30%)	47 (59.5%)

*1 man not voting

On the Motion to Table S.Amdt. 24 to S.Amdt. 2 to S. 1

	Women	Men*
pro-climate vote	12 (60%)	31 (39.7%)
anti-climate vote	8 (40%)	47 (60.25%)

*2 men not voting

S.Amdt. 58 (Schatz) to S. 1: To express the sense of Congress regarding climate change.

	Women	Men*
pro-climate vote	17 (85%)	31 (39%)
anti-climate vote	3 (15%)	48 (61%)

*1 man not voting

S.Amdt. 87 (Hoeven) to S. 1: To express the sense of Congress regarding climate change.

	Women	Men*
pro-climate vote	17 (85%)	42 (53%)
anti-climate vote	3 (15%)	37 (47%)

*1 man not voting

S.Amdt. 777 (Sanders) to S.Con.Res. 11: To establish a deficit-neutral reserve fund to recognize that climate change is real and caused by human activity and that Congress needs to take action to cut carbon pollution

	Women	Men*
pro-climate vote	15 (75%)	34 (43%)
anti-climate vote	5 (25%)	45 (57%)

*1 man not voting

S.Amdt. 1014 (Bennet) to S.Con.Res. 11: To establish a deficit-neutral reserve fund relating to responding to the economic and national security threats posed by human-induced climate change, as highlighted by the Secretary of Defense

	Women	Men
pro-climate vote	17 (85%)	36 (45%)
anti-climate vote	3 (15%)	44 (55%)

S.Amdt. 836 (McConnell) to S.Con.Res. 11: To establish a deficit-neutral reserve fund relating to the regulation by the Environmental Protection Agency of greenhouse gas emissions, which may include a prohibition on withholding highway funds from States

	Women	Men
pro-climate vote	13 (65%)	30 (37.5%)
anti-climate vote	7 (35%)	50 (62.5%)

S. 1: Keystone XL Pipeline Approval Act

	Women	Men*
pro-climate vote	12 (60%)	24 (31%)
anti-climate vote	8 (40%)	54 (69%)

*2 men not voting

Pro-Climate Bill Proposals: Senate

	Democrat	Republican
Male	16	5
Female	4	0

Pro-Climate Bill Proposals: House

	Democrat	Republican
Male	22	1
Female	7	0

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